Wetland Management in the Settled Area of Alberta

Summary of Public Comments

Alberta

WATER RESOURCES
COMMISSION

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Alberta Water Resources Commission
April 1991

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WATER RESOURCES
COMMISSION

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April 1991

Message from the Chairman:

On behalf of the Alberta Water Resources Commission, I would like to thank all the people who provided comments on wetland management in the settled area of Alberta. The commission received over 5,000 suggestions through public workshops, briefs, letters and response forms. The diversity and creativity of suggestions reflect a genuine concern for wetlands among Albertans.

I would also like to thank the members and staff of the Water Resources Commission, the interdepartmental wetland policy steering committee, government staff and members of the public who helped the commission run an effective public consultation process. Public response to the process has been very positive and gratifying.

All public comments will be carefully considered and will help the Alberta Government develop a sound management policy for the important wetlands of the settled area of the province.

Sincerely,

Alan Hyland
Chairman, M.L.A.

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Introduction

The Alberta Water Resources Commission (AWRC) was established to advise the provincial Cabinet about water resources management, policy and planning. The commission reports to Cabinet rather than a single department and has members from the legislative assembly, the public and key provincial government departments. The commission provides a forum for discussion of water resource management issues that involve a number of disciplines.

The commission was asked by Cabinet to address the issue of wetland management in the settled area of Alberta. Under the Public Lands Act, the settled area is called the White Area and the remaining unsettled portion of the province is referred to as the Green Area. A wetland policy was required to address significant losses of certain types of wetlands and provide coordinated direction to the many provincial government departments that are responsible for management of wetland resources in the settled area. An interdepartmental provincial government steering committee under direction of the commission prepared a draft wetland policy for public review.

The AWRC believes that public consultation is an important part of natural resource policy development. Information gathered through public consultation helps politicians and government officials make decisions which accurately reflect the needs and desires of Albertans. A public consultation program with the following objectives was developed:

1) to increase public awareness of the value of wetlands in the settled area of Alberta.
2) to gather public opinion about the draft wetlands management policy.
3) to improve the quality of wetland management decisions.

Approximately 3,600 copies of the draft wetland policy were circulated to interested groups and individuals to stimulate discussion on wetland management. A response form was included with the draft policy to encourage public comments and supporting information was provided in a background report. Staff of the AWRC also made presentations on the draft policy to 11 provincial public interest groups and 7 regional planning commissions in response to invitations.

Public open houses and workshops were held in 14 locations within the settled area in October and November, 1990. Members and staff of the AWRC and the interdepartmental steering committee hosted meetings in Lethbridge, Brooks, Calgary, Innisfail, Castor, Wainwright, Edmonton, Two Hills, Bonnyville, Barrhead, Grande Prairie, McLennan, Fairview and Fort Vermilion. The workshops were informal and all registrants were encouraged to participate.

Diverse comments on wetland management were received from a wide variety of individuals and groups. Landowners, farmers, municipal governments, planning commissions, irrigation districts, educational institutions, businesses and agricultural, conservation, recreational and industrial interest groups provided comments. Suggestions on wetland management were received from the 470 people who attended the public workshops, through 35 letters and briefs and 175 completed response forms. Representatives of 127 organizations provided comments (see Appendix 1).

Public comments were thoughtful and constructive. The diversity and complexity of wetland management issues were reflected in the comments. Wetland conservation and increased recognition of wetland values by society were widely supported. Other topics of discussion were compensation and incentives for wetland retention on private land, wetland inventories, definitions and ownership of wetlands, drainage, regional and local differences in wetlands, education, landowner and municipal involvement in wetland management, cooperation and coordination, landowner rights and water management.

All public comments from the workshops, briefs and letters and response forms are summarized in this report. Although comments are not reproduced verbatim to shorten the report, every effort was made to

accurately summarize public opinions. Conflicting positions and comments are presented. The term government is used in reference to the Alberta government unless otherwise indicated.

The AWRC and the interdepartmental steering committee that prepared the draft policy will carefully consider all public comments. The draft policy will be confirmed or revised based on public comments. The summary of public comments will be forwarded with a revised draft policy to Cabinet for consideration. If approved by Cabinet, the policy will provide guidance for management of wetlands in the settled area and will be implemented through the actions of provincial government departments.

Comments from Public Workshops

The 470 people who attended the public workshops provided over 2,000 suggestions and recommendations in response to the question *What do you think the Alberta Government should do to manage wetlands in the settled area of Alberta?* Small discussion groups of 6 to 8 people were hosted by facilitators from the Water Resources Commission and provincial government departments. A recorder ensured that recommendations and suggestions were accurately recorded on flipcharts. All public comments from the workshops are summarized in this section of the report.

Lethbridge

A public workshop was held in Lethbridge on the evening of October 25, 1990. The 31 registrants were organized into 4 groups and provided 93 recommendations that are summarized in the following categories:

Societal Responsibility

- Society has a responsibility to protect wetlands.
- Landowners should not be expected to pay for wetland protection.

Value of Wetlands

- Wetlands are valuable resources that should be appreciated.
- Wetlands have more than economic value.

Focus of Wetland Policy

- A wetland policy must sustain agriculture and wildlife in harmony.
- Retention and protection of existing wetlands is a priority.
- Rapid action to protect wetlands is required.

General Management Approach

- Government intervention in wetlands management should be minimized.

Inventory

- The government should conduct a comprehensive inventory of wetlands to assess the extent, condition, existing and potential use and value of wetlands.
- The inventory should recognize compatible uses of wetlands and could be used by local public to set wetland management priorities.

Wetland Definitions

- The government should develop a clear, workable definition of wetland that recognizes long term climatic cycles.
- Better definitions of permanent and intermittent sloughs are required.

Management Objectives

- Clear management objectives should be established for wetlands within river basins or defined wetland zones.
- The benefits and costs of different wetland types should be determined and significant wetlands should be identified.
- Specific, realistic targets for wetland management should be developed and presented to the public to create realistic expectations.
- Selected wetlands in both wildland and urban settings should be preserved.
- Some wetlands should be maintained in their natural state.

Regional and Local Differences

- The policy should recognize regional and local differences in wetlands.

Education

- The government should educate the public, including landowners and local officials about the value and uses of wetlands.
- Public use of wetlands should be encouraged as an educational tool.

Drainage

- Permanent or established wetlands should not be drained.
- Incentives which promote drainage of wetlands should be removed or reduced.

Wetland Creation and Restoration

- Creation of wetlands on marginal lands should be considered in exchange for drainage on good agricultural land.

Compensation and Incentives

- The government should provide incentives to landowners to encourage them to protect wetlands.
- The government should compensate landowners for preserving wetlands on their property.
- Direct payment and exemption from property tax should be considered as incentives.

Public Land and Wetlands

- The government should purchase some wetlands and retain ownership of large wetlands on public land.

Public Access

- Public access to isolated wetlands should be addressed.

Water Management

- The role of wetlands in water management should be recognized.

Wetland Ownership

- Ownership of wetlands should be established and indicated on land titles.

Landowner Involvement and Rights

- Landowners should be treated fairly and consistently.

Wildlife Damage

- Farmers should be compensated fairly for crop damage by waterfowl.

Irrigation

- Creation of wetlands with return flow from irrigation should be considered.

Specific Management Suggestions

- Regulations should be used to control development.
- Road design and construction should consider significant wetlands.
- Environmental impact assessments should be done to assess impacts on wetlands.
- Wildlife harvesting and management should be allowed under the policy.
- Mechanisms are required to make trade-offs between different wetland values and uses.

Conflicting Programs

- Policies and programs that conflict regarding wetlands should be modified.
- Programs should be "dovetailed".

Cooperation and Coordination

- Government and non-government organizations should cooperate regarding wetlands.
- Government, public and private efforts to manage wetlands should be coordinated.

Legislation

- Legislation should be used as a last resort to manage wetlands.
- Legislation is required to stop the destruction and loss of wetlands.
- Section 3 of the Public Lands Act should be enforced.

Policy Implementation

- Ongoing regular assessment and monitoring of the success or failure of the implementation of the wetlands policy should occur.
- Formal review of the wetlands policy should occur in the future.
- Significant groundwork should be completed before setting or implementing policies.
- Existing expertise should be used to implement the wetland policy.

Brooks

A public workshop was held in Brooks on the evening of October 29, 1990. The 26 registrants were organized into 4 groups and provided 96

recommendations that are summarized in the following categories:

Societal Responsibility

- Both urban and rural residents should be encouraged to maintain wetlands.
- The general public must develop a consensus about the wetland problem.

Value of Wetlands

- An economic value of wetlands to society should be determined.
- The value of wetlands must be properly recognized in decision making.
- All societal values and benefits of wetlands should be identified on a regional basis and reflected in the policy.
- The value of temporary wetlands should be recognized.

Focus of Wetland Policy

- A clear, consistent policy is needed to coordinate the actions of government.
- The policy should be flexible and allow more landowner responsibility.
- The current rate of loss of wetlands must be reduced and existing wetlands must be secured.
- Increased use of existing wetlands should be facilitated.
- The policy should recognize seasonal and semi-permanent wetlands.
- The policy should address the drainage and reclamation of wetlands with respect to agricultural potential.
- The policy should address the recreational use of wetlands and private land.
- Significant wetlands should be preserved.

General Management Approach

- Management should focus on trade-offs and problem solving and should allow for experimenting and investing.
- Integration is preferable to legislation.
- The focus should be on leadership rather than management.

Education

- The general public should be educated about multiple use of water resources and the values and management of wetlands.
- Technical advice should be provided to groups involved in wetland management.
- Wetland education should be incorporated into schools.

Drainage

- A moratorium should be placed on wetland drainage until a common policy is established.

Wetland Creation and Restoration

- Creation of new wetlands should be considered particularly in dryland range areas for multiple use purposes.
- New wetlands should be located and designed to avoid conflicts and environmental effects on adjacent lands should be monitored.

Compensation and Incentives

- Financial incentives or compensation should be provided to landowners to encourage wetland protection and good management.
- Compensation should be extended to adjacent lands that are affected by the wetland.
- Disincentives to wetlands protection should be removed.

Public Land and Wetlands

- Selected valuable wetlands should be purchased with the agreement of the landowner.

Water Management

- Wetlands are a legitimate use of water and should receive water allocations under licence.
- Assistance should be provided to develop multiple use water storage for irrigation, recreation, wildlife and domestic uses.
- Water management responsibilities and riparian rights should be defined.
- The government should enter into agreements with other parties regarding the allocation and management of water.

Wildlife Damage

- Compensation should be provided for wildlife damage and wildlife populations should be controlled through bag limits.

Irrigation

- Irrigation districts should receive credit or recognition for the portion of their water allotment that is used to maintain wetlands.
- The detrimental effects of irrigation on adjacent land should be determined through collection of baseline data, groundwater monitoring and assessment of environmental impacts.
- Fencing should be placed along irrigation canals to restrict cattle and provide wildlife habitat.
- Projects to get rid of open ditches in the Eastern Irrigation District should be supported.

Management Agencies and Responsibilities

- Wetland reserves should be co-managed with the status of participants recognized by title.

Landowner Involvement and Rights

- Landowners should recognize the importance of wildlife habitat.
- Landowners must have an interest in managing wetlands because the government cannot afford to do it.

Wetland Degradation and Pollution

- Agricultural and industrial pollution of wetlands should be monitored and controlled.

Wildlife

- The significance of wildlife needs associated with wetlands should be recognized by the government.

Specific Management Suggestions

- Integrated resource management and multiple purpose water management should be combined.
- Wetland management should be fit into integrated resource planning.
- Infrastructural barriers should be removed so that wetlands can be promoted as an industry.
- The productivity of existing wetlands should be increased and more money should be spent on wetland management research.
- Negative impacts of wetlands such as weeds and insects must be addressed.
- The effects of wetlands on salinity should be recognized and controlled.

Cooperation and Coordination

- Cooperation between agriculture and wildlife interests should be promoted.
- Interagency cooperation should be fostered.
- Conflicts between government programs should be resolved.
- Wetland management actions by government agencies and user groups should be coordinated.

Legislation

- Legislation should be practical, simple, positive and proactive.
- The importance of wetlands to wildlife should be recognized under the Water Resources Act.

Policy Implementation

- The policy must have teeth.
- Management responsibilities, timing, priorities, finances and monitoring should be addressed in an action plan for implementation of the policy.
- The Alberta Water Resources Commission should develop, implement and monitor a plan of action.

Calgary

A public workshop was held in Calgary on the evening of October 30, 1991. The 48 registrants were organized into 6 groups and provided 199 recommendations that are summarized in the following categories:

Societal Responsibility

- The government should promote a social obligation to retain wetlands.
- The idea that wetlands preservation is in the best interests of everybody should be marketed.
- Farmers should not carry the financial burden of maintaining wetlands.

Value of Wetlands

- Wetlands should be recognized as a valuable natural resource.
- The societal value of wetlands exceeds the individual value to the landowner.
- The net economic value of wetland drainage must be demonstrated before it is permitted.

- The value and benefits of wetlands such as wildlife habitat, water table maintenance and ecological or natural regimes must be recognized.

Focus of Wetland Policy

- Alberta needs a comprehensive wetland management policy that is flexible enough to accommodate local situations and open to amendment based on public input.
- Wording of the policy should be consistent.
- The statement of principles and strategies in the policy should be stronger and clearer (i.e. replace "should" with "must").
- A framework for wetland policy decision making is required.
- Wetlands should be saved but not at all costs.
- The basis of wetland management decisions should be clarified.
- Priorities should be set and critical wetlands should be addressed quickly.
- Present land use and site specific situations should be considered in the policy.
- Wetland decision making should be broader based.

General Management Approach

- Wetlands should be part of integrated land use decisions.
- Outside expertise should be used where possible.
- Wetland management decisions should be broad based.
- Trade-offs should be clearly understood when making wetland management decisions.
- Public consultation should be part of wetland management.

Wetland Planning

- Wetland planning is required.
- Long range plans that are beyond political influence should be implemented.

Inventory

- A central database of existing wetland management activities, information and research should be developed.
- An inventory of wetlands should be prepared.
- A workable classification system based on ecological, legal, hydrological, biological and social factors should be established.
- Available information should be used.
- Wetlands evaluation criteria should be developed and management priorities should be set.
- A priority system for considering wetlands and other land and water resources should be established.

Wetland Definitions

- Clear definitions of the types and values of different wetlands should be prepared.
- Definitions of permanent and nonpermanent wetlands are required.
- Streams should be included in wetland definitions.

Management Objectives

- Clear objectives for wetlands should be set for the government and public.
- Provincially significant and representative wetlands should be designated.
- Explicit rationale and quotas for wetlands retention should be developed.
- Temporary wetlands should be protected for ducks and geese.
- Wetland use should be sustainable and not threaten the health of the wetland.
- Wetland conservation within ecological zones should be prioritized.
- Creative alternatives to agricultural use of wetlands should be considered.
- Heritage wetlands should be established for landmark and educational purposes.
- A wetland national or provincial park should be considered for Alberta.

Education

- The general public, landowners, children, media and governments should be educated about wetland values and trade-offs.
- Common property, historical, ecological and resource values of wetlands should be emphasized in educational programs.
- Target audiences for education should be identified and educational projects should be funded.
- Real life examples should be used for education.

Drainage

- Drainage of wetlands should be stopped.
- Incentives and support for wetland drainage should be removed.

- Government grants for drainage should be transferred to wetland retention.
- Some drainage should be permitted.
- Water retention should be encouraged to counter the effects of long term climatic warming.

Wetland Creation and Restoration

- New wetlands should be developed in appropriate locations and dry wetlands should be rehabilitated.
- Urban runoff should be used to augment or create wetlands and purify the runoff.

Compensation and Incentives

- Landowners should be compensated for protecting wetlands on their land.
- Farmers should be consulted about appropriate incentives.
- Incentives are preferable to punitive action.
- Grain quotas should be adjusted to encourage wetland retention.
- Financial incentives, such as tax breaks or subsidies, should be provided for wetland retention or enhancement.
- Incentives should be indexed to provision of public access.
- Financial assistance should be provided to local governments for wetlands for habitat, recreational use and storm water management.

Public Land and Wetlands

- Crown lands should not be drained.
- The government should purchase significant wetlands from landowners and manage them for public use.
- The government should maintain public ownership of significant wetlands on public land.

Water Management

- Water conservation should be encouraged especially in water short areas such as southern Alberta.
- Water retention should be incorporated into the wetland policy and the federal Green Plan.
- Water quality should be monitored.

Research

- Research on wetlands should be increased.
- Topics for research are effects of rural development, urban runoff and road construction on wetlands, productivity, wetland management in other jurisdictions, groundwater, ecology, chemistry and methods for wetland rejuvenation.

Landowner Involvement and Rights

- Landowners should be able to charge for recreational opportunities on their land (i.e. user pay principle).
- Landowners are directly affected and should decide what happens on their land.
- The government may have to sacrifice landowner rights in the public interest.
- The landowner should be recognized as a key stakeholder and should be involved in wetland management decisions.
- The actions of landowners can affect public interests.

Wildlife Damage

- Full compensation should be provided for crop depredation by wildlife.

Irrigation

- The value of irrigation water for wetlands should be recognized.

Management Agencies and Responsibilities

- A single government body should coordinate all aspects of wetland management.

Scope of the Policy

- A wetland policy should be developed for the entire province.
- The policy should focus on the White Area and then the Green Area.
- The policy should be developed on a watershed basis rather than province wide.

Specific Management Suggestions

- Riparian habitat management plans should be prepared especially for leased land.
- High priority wetlands should be protected under legislation.
- Alberta should join the heritage rivers system.
- A central clearing house for wetland and water management programs should be established.

- Alternatives for sustainable use of wetlands such as tourism should be considered.
- Clear criteria for wetland decision making and conflict resolution should be defined.
- Cost/benefits analyses should be done for wetland management.
- Road construction that reduces the water table should be revised.
- Markets for alternative agricultural products should be found.
- Wildlife and wetland management must be integrated to maintain sufficient wildlife habitat.
- Conservation easements should be used to protect wetlands.
- Royalties or fees for access to Crown land should be used for habitat maintenance rather than given to lessees.
- Beaverdam destruction programs should be removed or reduced.

Cooperation and Coordination

- Existing programs should be evaluated.
- Cooperation, coordination and communication between provincial governments, government departments, farmers, industry, users and interest groups regarding wetlands should be increased.
- Partnerships should be established to benefit the wetland resource.
- All departments should work within the wetlands policy.

Legislation

- Legislation for wetland protection should be implemented and enforced.
- Conflicting legislation at the federal, provincial and municipal level should be eliminated.
- Legislative tools should be used to control access and development around wetlands (e.g. rights of entry agreements).
- The wetlands policy should be implemented as legislation under a single department.
- Legislation, policies and programs that are inconsistent with the wetlands policy should be revised.
- The Water Resources Act should be rewritten to reflect the multiplicity of water users.
- Responsibility for a rewritten Water Resources Act should be shared between departments, different levels of government and non-government organizations.

Policy Implementation

- Adequate funding should be provided to implement the policy.
- Clear leadership is needed for policy implementation.
- Minimum standards and cost effective administration of the policy are required.
- The policy should have teeth and should be stringently enforced.

Innisfail

A public workshop was held in Innisfail on the evening of November 6, 1990. The 24 registrants were organized into 4 groups and provided 142 recommendations that are summarized in the following categories:

Societal Responsibility

- Urban residents must carry their fair share of wetland management costs.

Value of Wetlands

- The multiple values of wetlands and the value of wetland margins should be acknowledged.
- The genuine worth of wetlands must be addressed.
- Wetlands have value beyond economic growth.
- The importance of riparian habitat and biological diversity should be recognized.

Focus of the Policy

- The government should emphasize protection of existing wetlands as the first step.
- A good cross section of wetlands should be protected.

General Management Approach

- A team approach to wetland management should be used.
- Money and labour should be used to optimize production on permanently protected wetlands.
- Wetlands preservation should be fiscally responsible.
- Problems should be anticipated and prevented before they happen rather than cleaned up after they happen.

- Criteria for management of wetlands should be established (i.e. public consultation, draft policy and implementation of approved policy).
- A long term ecosystem approach to wetland management should be applied.
- The concept of multiple use for wetlands should be viewed with caution particularly regarding recreation and wildlife.

Inventory

- Inventories of existing wetlands and assessment of wetland losses and impacts should be conducted to help set management priorities.
- Wetland dynamics and inter-relationships should be determined.

Wetland Definitions

- Clear definitions of wetland types and permanency should be developed.

Management Objectives

- Large, significant water bodies should be maintained while small potholes can be drained.
- Biological diversity should be maintained.
- A policy of no-net-loss of wetlands should be instituted.

Regional and Local Differences

- Wetland differences in specific areas should be recognized.

Education

- The public and government staff should be educated about the value of wetlands.
- A positive image for agriculture should be promoted.
- Landowners should be educated through incentives.
- Landowners should educate other landowners.
- Stewardship on private land should be encouraged.
- The government should provide technical advice on water management.

Drainage

- Tax credit incentives for drainage should be eliminated.
- Drainage should be used to create permanent wetlands or for wetland consolidation but not for agriculture production.
- If drainage of any wetland must occur, compensating projects should be undertaken.

Wetland Consolidation

- The cost/benefit ratio and ecological benefits of slough consolidation should be examined.
- Consolidation of wetlands on a farm unit should be permitted.

Wetland Creation and Restoration

- Wetlands should be recreated in appropriate areas.
- Prevention of wetland loss is cheaper than reclamation.

Compensation and Incentives

- Wetland acreage should receive a double increment property tax break.
- Financial incentives or public recognition should be provided to landowners to encourage wetland protection.
- The government should provide incentives to maintain tree cover.
- Subsidies should be provided for maintaining not draining wetlands.
- Farm assistance programs should be structured to encourage wetland conservation.
- Taxes should be reduced and landowners should be informed about the basis of tax assessments to encourage wetland preservation.
- Programs should be developed so that landowners can economically manage wetlands (e.g. sponsorship by corporate or private organizations).

Public Land and Wetlands

- The government should lease, purchase or legislate control of the more critical wetlands.
- Crown ownership of wetland bottoms should be enforced.
- The government should not purchase individual sloughs to protect wetlands.

Water Management

- Control of activities on private land should be based on public ownership of water resources not on dictating what a landowner can do.

- Wetlands can be used for waste water treatment.
- An overall watershed management policy is needed to establish firm Crown ownership of rivers.
- Problems of excess water should be addressed. Landowners should be allowed to control the water level of wetlands.
- Management of the upper watersheds of major rivers should be enforced.
- Water should be protected from degradation.

Research

- A better appreciation of the relationship between wetlands, flowing water, soil erosion, flooding and groundwater is required.
- The effects of transportation systems, industry and urban development on wetlands should be determined.

Wetland Ownership

- The ownership and boundaries of wetlands should be determined and the information conveyed to landowners.

Landowner Involvement and Rights

- Self-regulation by landowners should be facilitated and over legislating should be avoided.
- The government should work with landowners to help them manage wetlands.

Management Agencies and Responsibilities

- Municipalities should not lose tax base as a result of wetland management initiatives.
- The importance of municipal governments in wetland management should be recognized.
- Local groups should be empowered to implement the policy.

Scope of the Policy

- Wetland protection should be extended to the Green Area.

Wetland Degradation and Pollution

- Impact of aerial spraying should be determined.
- Streams and wetlands should be protected from livestock damage and chemical pollution from fertilizers and herbicides.
- The provincial government should provide increased funds for fencing to protect waterbodies from livestock.

Wetland Margins

- The value of wetland margins and surrounding lands should be recognized.
- Vegetation around wetlands should be addressed in the wetland policy.
- The relationship between wetlands and adjacent margins and uplands should be determined.
- The width of margins around wetlands should be increased.

Specific Management Suggestions

- The Red Deer model for mosquito control should be used to make wetlands more attractive.
- A shoreland/water ratio of 3:1 is recommended.
- Road designs should be altered to protect wetlands.
- Wildlife should be treated the same as a crop of similar value.
- The agricultural community and conservation groups should work together to protect wetlands through conservation easements and restrictive covenants.
- Environmental impact assessments should be completed for projects on public lands.

Cooperation and Coordination

- Non-government and government policies and programs should be coordinated.
- Conflicting programs should be modified or removed.
- Non-government organizations with funds for wetland protection should be connected to supportive landowners.

Legislation

- The Water Resources Act should be enforced possibly using a SWAT team approach.
- Legislation should be used to stop abuse of water resources by agricultural operations such as feedlots.
- Legislation should be used to protect wetlands, their water supply and surrounding ecosystems.
- Laws should be changed to allow conservation easements and restrictive covenants.
- Legislation should be enforced on public land.

- Legislation should be clear, well designed, user friendly and enforceable.
- Federal and provincial legislation and policies should be included when wetlands are considered.
- Legislation should be used to ensure that a certain percentage of land is left in a natural state.

Policy Implementation

- Funding sources such as foundations, income tax rebates and bequests should be considered.
- Existing programs should be modified rather than creating new programs.
- The government should facilitate the financial and legislative aspects of wetland protection but should not be the major source of funds.
- The policy needs to be practical, simple and integrated so that it can be easily implemented.

Castor

A public workshop was held in Castor on the evening of November 7, 1990. The 26 registrants were organized into 4 groups and provided 116 recommendations that are summarized in the following categories:

Value of Wetlands

- The value of wetlands to urban residents, landowners and nature should be determined.

Focus of Wetland Policy

- The wetland policy should be strong, comprehensive, consistent and conservation oriented.

Inventory

- The size, location, vegetation, water quality, wildlife and use of wetlands should be assessed.
- The government should provide technical assistance for a wetland survey.

Wetland Definitions

- A manageable size for wetlands should be defined.
- Almost all wetlands in southern Alberta are dry at some time and the concept of a permanent wetland should be redefined for this area.

Regional and Local Differences

- Regional differences in wetlands should be recognized.
- The wetland policy should be area specific.

Education

- Landowners, land users, hunters and the general public should be educated about the value of wetlands.
- The mass media, direct mailouts to landowners and school programs should be used as educational tools.
- Education should be used to break down barriers regarding wetlands.
- A technical resource person should be provided through regional or local government agencies to advise landowners on wetland and land use management.
- Reference to a wetland management advisor should be mandatory before any drainage is allowed.

Drainage

- The government should address and control drainage using licensing.
- Drainage of permanent slough/marsh wetlands should be prohibited.
- Drainage of some nonpermanent wetlands should be prohibited depending on regional situation.
- The impact of wetlands on groundwater recharge should be determined before allowing drainage.

Wetland Creation and Restoration

- Large waterbodies should be created or enhanced to provide recreation and irrigation opportunities.
- Wetlands should be created in conjunction with the proposed Special Areas Water Supply Project.
- Barriers to creation or restoration of wetlands, such as water licensing, should be re-evaluated.
- Government should support programs to get water into the Special Areas and southeastern Alberta to create wetlands.

Compensation and Incentives

- Incentives should be provided by government

and/or private groups to encourage landowners to conserve wetlands.
- Incentive payments for wetland preservation should compensate the landowner for the net value of lost production.
- Subsidies for drainage should be eliminated and the funds diverted to incentives to protect wetlands.
- Tax incentives and paid hunting should be considered as a way to compensate landowners for protecting wetlands and wildlife habitat.

Public Access

- Farmers should be compensated for damage by trespassers.
- Access to wetlands and adjacent land and liability should be addressed.
- Control of hunting should be increased.

Water Management

- Control structures should be placed on all drainage projects to maximize use of water.
- Backflooding should be promoted.
- The water supply along the Battle River should be improved to maintain water quality.
- Water use should be maximized for multiple purposes.
- Water should be recognized as a valuable resource in limited supply.
- The government should support programs to move water into specific areas to create wetlands.
- Existing structures and works should be assessed for their wetland potential.
- Vegetated waterways should be used to control erosion and improve water quality.

Research

- The impact of seismic activity on surface water runoff and groundwater should be determined.

Landowner Involvement and Rights

- Landowners should be allowed to control water on their property.
- Farmers should be supported in defending their land.
- Landowners should be consulted on any items that directly affect them.
- Joint projects with landowners should be initiated.

Wildlife Damage

- Government and other organizations should provide adequate compensation for crop damage.

Management Agencies and Responsibilities

- A single government agency should be responsible for wetland management.

Land Clearing

- Tree cover should be maintained to retain snow, soil moisture and water supply.

Specific Management Suggestions

- Wetland consolidation should be an option.
- The relationship between wetlands and salinity should be recognized.
- Leasing of permanent wetlands from landowners should be considered (e.g. Saskatchewan's Prairie Pothole Program under the North American Waterfowl Management Plan).
- The need for flexibility at the local level should be recognized.
- Government road grants should include provision for wetland mitigation.
- Wetland losses to highway construction by Alberta Transportation and Utilities and to urban development should be addressed.
- The recreation and tourism costs of wetlands should be recognized.

Coordination and Cooperation

- Wetland and water management programs of government and non-government organizations should be coordinated to avoid duplication of effort.
- Cooperation among government and public organizations should be increased.

Legislation

- Existing and proposed legislation should be enforced.
- Government legislation should be reviewed and coordinated to remove conflicts.

Enforcement

- Fines for hunter misbehaviour and land use infractions should be increased and enforced.

- The enforcement budgets of Alberta Fish and Wildlife and Alberta Environment should be increased.

Policy Implementation

- The positive and negative consequences and the effectiveness of policy implementation should be monitored.
- The operation of works or projects should be reviewed within a certain time frame.

Wainwright

A public workshop was held in Wainwright on the evening of November 8, 1990. The 10 registrants were organized into 2 groups and provided 75 recommendations that are summarized in the following categories:

Societal Responsibility

- Society as a whole, not only landowners, should pay the cost of maintaining wetlands.
- Public funds should be allocated to projects so that society benefits as well as landowners.

Focus of Wetland Policy

- The policy should be consistent and contain specific goals and not motherhood statements.
- Since farmers can look after their own land and water, the need for a government policy is questionable.
- Maintenance of wetland diversity should be encouraged.
- The importance of the environment over jobs should be recognized.

Wetland Planning

- Engineering and environmental assessment should be part of planning.
- Planning should be conducted on a watershed basis rather than on the basis of individual projects.
- Changes in land use should be monitored.
- Wetland definitions should be clarified.
- A no-net-loss policy should be implemented on an ecoregion basis.

Education

- The public and land users should be educated about the many values and responsible use of wetlands.
- Education should be focused on the youth and those who are affecting wetlands the most.
- Monetary benefits from wetlands through paid hunting should be shown.
- Assistance with wetland management should be provided.
- Educational tools should include demonstration projects, seminars and school projects.

Wetland Consolidation

- Small nonpermanent sloughs should be consolidated into a large permanent slough to improve groundwater recharge and waterfowl habitat.

Compensation and Incentives

- Incentives should be provided to encourage wetland preservation.
- Incentives for wetland protection should include tax exemptions, revisions to the quota system, direct payments and reallocation of drainage subsidies to wetland preservation.

Public Access

- Public access to wetland projects that are privately or publicly funded must be determined.
- Shoreline development should be restricted to maximize public access.

Water Management

- Water should be conserved for everybody and used in the best way possible.
- Water should be left alone because nature will take care of it.
- Industrial use of water should be controlled.
- Water should be allocated to wetlands.
- Wetlands should be recognized as an efficient way to clean water.
- The technical aspects of wetland management such as downstream effects should be recognized.
- The effect of wetlands on soil salinity should be recognized.
- The public should be consulted on local water management projects.

Management Agencies and Responsibilities

- Someone should be assigned responsibility for wetlands.
- Experts to assist landowners with wetlands management should be designated.
- A local watchdog body such as a conservation district should be responsible for wetland management.

Wetland Degradation and Pollution

- Pollution such as pesticides, urban runoff, lead shot and livestock damage should be controlled.
- The effects of pollution on water quality, aesthetics and public perceptions should be reduced.

Wetland Margins

- Buffer zones and wetland margins should be protected.
- The importance of adjacent uplands for nesting habitat should be recognized.

Specific Management Suggestions

- Wetlands should enhance natural resources such as water and topography.
- The problem of farming around sloughs should be recognized.
- Beavers should be controlled.
- Haying or grazing should be delayed until July 15th in wetland areas.
- Changes in land use should be monitored.

Cooperation and Coordination

- Responsibility for control of wetlands should be assigned to municipal districts, landowners or the provincial government to resolve existing conflicts.
- A consistent wetland policy should be prepared and government agencies, policies and programs should be coordinated.
- Cooperation among government agencies, landowners and other groups should be increased.

Enforcement

- Enforcement must be de-politicized both provincially and locally.
- Strong legislation should be supported by active enforcement.

Edmonton

A public workshop was held in Edmonton on the evening of November 15, 1990. The 115 registrants were organized into 12 groups and provided 443 recommendations that are summarized in the following categories:

Societal Responsibility

- Greater political will to mitigate large scale impacts is needed.
- People should contribute to the development and maintenance of wetlands (i.e. beneficiaries should pay).
- Wetland users should pay or contribute to the cost of wetland management.
- The public, landowners and governments must have the will to act.

Value of Wetlands

- The multiple benefits of wetlands to society should be clearly articulated and recognized.
- Politicians should recognize the value of wetlands. Wetland diversity is important.
- The government should determine the monetary value of the public benefits of wetlands.
- The value of wetlands should be recognized in land use decisions such as subdivisions.
- The intrinsic value of wetlands should be recognized.
- Ways to fairly value wetlands for a variety of purposes should be determined.
- The importance of wetlands to the ecosystem should be recognized.
- The value of overflow from permanent sloughs to temporary sloughs should be recognized.

Focus of Wetland Policy

- Policy and enabling legislation to protect and retain wetlands on private and public lands should be instituted.
- A national or international wetland policy is required.
- A policy for the management of wetlands in Alberta should be established.
- The policy statements should indicate a goal or intent and be more specific, directive and detailed.
- A clear government policy is required so that different agencies will not work at cross

purposes.
- Inconsistencies in the policy should be removed.
- The policy should be fair to all stakeholders.
- The policy should provide a framework for discussion.
- The final policy should contain quantifiable objectives.
- Statements on page 4 regarding the maintenance of peatland values should be clarified.
- Statements on page 6 about management of regional wetlands should be clarified.
- Separate policies should be developed for public and private land.
- Wetlands in the north should be protected before they are lost.
- An aggressive approach to wetland protection should be implemented.
- The policy should identify which wetlands should be drained, preserved or restored.

General Management Approach

- The government should set a good example through their projects and activities.
- Short term decision should be avoided. The provincial government should have control over the population on wetlands.
- Public participation in developing the wetland policy is supported.
- All levels of government should quit talking and start acting.
- Worthy programs and organizations should be supported.
- Wetland management should be adjusted to suit climate and geography.
- An integrated approach to wetland management that involves all levels of government, industry, landowners and non-government organizations, should be used.
- Development around wetlands should be controlled to ensure compatibility.
- A proactive approach to wetland development is needed.
- Equal emphasis should be placed on permanent and temporary sloughs.
- Wetland management programs should be technically and economically sound.
- A carrot rather than a stick is the best approach.
- The context of wetlands should be evaluated when considering protection.
- The broader issue of wildlife and wetlands should be examined.
- Beneficiaries and users of wetlands should pay.
- All related resources, activities and areas should be considered.
- Management should be based on a network of wetlands not on individual wetlands.
- An ecosystem approach to wetland management based on catchment areas is required.
- All interests should be equally represented when developing policy.
- Legislation should be applied on public lands and education and incentives should be used on private land.

Inventory

- The government should complete a wetland inventory for the entire province.
- All categories of wetlands should be identified, classified, described and mapped.
- A comprehensive database of existing wetlands should be established to help set management priorities and monitor change.
- An ecological classification should be applied to wetlands.
- A wetland inventory should use new and existing information.
- Land classification should be changed from a use to a societal value orientation.
- Key wetlands should be identified and protected.
- An inventory and classification of soil types should be completed for use in private and public land planning.

Wetland Definitions

- A clear workable definition of the different types of wetlands should be prepared.

Management Objectives

- The diversity of wetland types should be maintained.
- Standard administrative boundaries should be developed based on ecological characteristics or river basins.
- Wetlands should be designated for tourism use such as bird watching.
- Land use in ecologically sensitive areas should be controlled using zoning.
- The importance of specific areas for particular species should be recognized.
- Regional targets for wetland conservation should be set.
- Management priorities and standardized, measurable objectives should be developed for

all wetland types.
- Wetlands in the best agricultural land should not be preserved.
- Clear goals for wetlands should be established.
- Wetlands should be saved for wildlife habitat.
- A no-net-loss policy should be established for wetlands.
- There should be no-net-less of wetland abundance and diversity within planning units such as regions.
- Mitigation within a region should be 100 percent.
- Tourism and recreational opportunities should be enhanced.
- Wetlands should be used for many purposes not just wildlife habitat.

Regional and Local Differences

- The policy should be sensitive to regional and local differences and variation in wetlands and land use.

Education

- Wetland management and conservation programs and projects should be publicized using the media and signs.
- The Alberta Water Resources Commission should support public education programs such as Project Wild.
- The public should be educated about the value, benefits, history, non-destructive uses and legislative aspects of wetlands.
- Comprehensive education programs should be directed at politicians, local governments, students, landowners and the general public.
- Wetland interpretive programs and demonstration projects should be established.
- Videos and letters from the public should be used as educational tools.
- Wetland and environmental education should be introduced into schools.
- Technical advice regarding wetland protection and management should be provided to landowners and municipalities.
- Adult education and extension programs, similar to soil conservation initiatives, are needed.

Drainage

- Drainage programs should not be 100 percent funded - 85 percent government/15 percent landowner should be the funding formula.
- Producers should be encouraged not to drain wetlands.
- Wetland drainage should be stopped.
- A moratorium on wetland drainage should be enforced until the policy is approved.
- Government expenditures on drainage should be re-evaluated.
- Drainage contractors should require a licence or permit for each project.
- Subsidies, incentives and programs that encourage drainage should be removed.
- Environmental impact assessment should be considered for wetland drainage projects.
- Marginal agricultural land should not be drained.
- Wetland consolidation should be recognized as an alternative to drainage.
- Flooding from legal and illegal drainage should be controlled.

Wetland Creation and Restoration

- Restoration of significant wetlands should be promoted as well as protection of remaining wetlands.
- Habitat should be created and enhanced as well as preserved particularly for threatened and endangered species.
- Animals and plants should be reintroduced into reclaimed areas.
- Control weirs should be used to create wetlands.
- Loss of wetlands should be mitigated.
- Former wetlands should be re-established.

Compensation and Incentives

- Compensation and financial incentives should be provided to landowners to encourage wetland preservation.
- Compensation should be based on lost acreage including a buffer zone around a wetland.
- Taxes on wetlands should be eliminated or reduced.
- Taxes on drained wetlands should be increased.
- Disincentives to wetland preservation such as taxation and grain quotas should be removed.
- Subsidy programs should require landowners to protect a portion of their poorer lands.
- The financial burden of wetland conservation should be removed from farmers and landowners.
- Municipalities and landowners should not be penalized for wetland protection.
- The source of money for compensation should be determined.
- Incentives should not be used to preserve wetlands on private land because of the

possibility of abuse.
- A single source for information about incentive programs should be established.
- The government must police incentive programs to prevent abuse.
- Landowners should be recognized for maintaining or creating wetlands.
- Farmers should be allowed to exempt up to 10 percent of their land from tax assessment for wildlife habitat and provincial or federal funding should be provided to the municipality to make up the lost revenue.

Public Land and Wetlands

- Wetlands should be a public resource.
- Wetlands on public land should be protected and maintained.
- Key wetlands should be purchased from landowners with arbitration if required.
- The policy for sale and disposition of public land should be re-assessed.
- All wetland ecosystems on public land should be preserved.
- Arbitration may be required to secure wetlands with critical wildlife habitat.

Water Management

- Runoff from private and public land should be controlled using legislation.
- Creeks and streams should be cleaned of obstructions such as beaverdams while protecting the natural character of the channels.
- Drainage basins should be used as management units.
- Baseline studies of lakes should be used to determine stabilization levels.
- Water management should be responsible and arm's length from provincial and local governments.
- Small water courses should be controlled to maintain flows.
- A system for alternate water storage should be developed.
- The water cycle should be recognized.
- The effects of oil field injection on shallow groundwater and effects on surface water such as loss of sloughs should be recognized.
- Flowing water should be controlled to prevent damage to farm land and urban areas.
- Water quality in wetlands should be protected.
- The relationship between regional water management and permanent and nonpermanent waterbodies should be addressed.

Research

- More research on wetlands values and functions should be done.
- Wetland management in other jurisdictions should be reviewed.
- The positive and negative effects of wetland losses and management activities should be determined.
- Research should be done on the effect of global climatic change and groundwater recharge on wetlands.
- Wetland research should be funded.

Wetland Ownership

- Ownership of wetlands and management jurisdiction should be resolved.
- Public and private investments in wetland preservation should be safeguarded through title transfer.
- Legislation on wetland ownership should be examined.

Landowner Involvement and Rights

- Rights of landowners to manage their land should be respected.
- Landowners should have control of water and wetlands on their land.
- Procedures to protect landowner rights should be instituted.
- Landowners should be encouraged to give over land to develop wetlands.
- Private landowners should be encouraged to preserve wetlands.

Wildlife Damage

- Compensation for wildlife damage to crops should be equitable and consistent across the province.
- The government should work closely with Ducks Unlimited on compensation to landowners.
- Full compensation should be paid for wildlife damage to crops.

Irrigation

- Water supply to wetlands associated with irrigation districts should be guaranteed.
- It should be determined if wetlands are a

reasonable use of return flow water from irrigation districts.

Management Agencies and Responsibilities

- An unbiased agency is needed to manage water resources.
- A central water management authority should be established.
- An independent appeal board for wetland management should be established.
- One agency or government department should be responsible for wetland management with cooperation from all other departments and levels of government.
- The impact of the Natural Resources Conservation Board, the Energy Resources Conservation Board and the Environmental Protection Act should be determined.
- Water management responsibilities should be transferred from Alberta Environment to local water management authorities or regional planning commissions.
- Water Resources within Alberta Environment should respond to farmers complaints better.
- A provincial board with its own technical staff should be established to regulate and enforce the provincial wetlands policy.
- Alberta Environment should be restricted to licensing and enforcement to avoid conflicts with funding and development.
- Management jurisdictions regarding wetlands should be clarified.
- Any reductions in municipal tax base as a result of wetland management should made up by the provincial government.
- The key role of municipalities and local governments in implementing the wetland policy should be recognized.

Scope of the Policy

- The wetland policy should cover the entire province not just the settled area.
- The policy should address nonpermanent wetland and adjacent uplands.

Wetland Degradation and Pollution

- Legislation should be used to prevent pollution of wetlands.
- Livestock and sewage from cottages must be controlled.
- Intensive tourism development should avoid wetlands particularly on public land.

Roads

- Alberta Transportation and Utilities and Municipal Affairs should avoid flooding and draining or filling wetlands when constructing roads.
- Provincial and municipal flexibility regarding road construction should be increased to avoid problems such as Lily Lake.
- Mitigation should be required as part of road construction.

Wetland Margins

- The fringe of land around wetlands must be protected and managed as well as the wetland.
- A weed control policy for wetland fringes is needed.

Land Clearing

- Farmers should understand the implications of clearing marginal land.
- The government should not subsidize clearing of public land and wetland fringes especially on grazing land.

Peat

- A provincial policy is required so that peatlands are addressed.
- The effects of reforestation on peatlands should be recognized.
- Peatlands should be recognized as wetlands and farming operations.
- More research information on peatland management is required to develop a policy.
- Peatland should be preserved for its inherent value.
- Methods for farming, harvesting and mining of peat should be defined.
- Peatland management and values should be re-examined within the context of the policy and inconsistencies removed.

Agriculture

- Agricultural practices should be managed as part of wetland management (e.g. lure crops, crop mix).
- The economic viability of the agricultural industry should not be compromised by wetland

management.
- Marginal land should not be developed for agriculture.
- Farmers should organize into an interest group.

Wildlife

- Nesting habitat should be provided.
- Habitat for migratory and resident birds should be supported.
- Wildlife use of wetlands should be encouraged and habitat should be protected and enhanced.
- Migratory birds and distances between wetlands should be considered.
- Beavers should be protected as part of the natural ecosystem.

Specific Management Suggestions

- Forfeited marginal lands should be dedicated to wildlife production.
- Page 148 of the federal Green Plan should be considered.
- A levy or land allocation should be imposed on new development to replace or mitigate lost wetlands.
- Half sections should be used as wetland management units.
- The role of wetlands in the food cycle should be identified.
- Specific solutions should be developed.
- The contribution of soil erosion to wetland loss should be considered.
- Procedures to protect and enhance wetlands should be reviewed in all departments.
- Drainage potential should be examined from an urban perspective.
- Limits to urban expansion should be legislated to use land more creatively.
- Agricultural use of provincial parkland areas should leave sufficient forage for wildlife.
- Conservation easements or caveats should be used when public land is sold to protect endangered species and spaces.
- Major development projects ($1 to $2 million) should be required to complete environmental impact assessments.
- Impacts of proposed policies and actions on related resources and areas should be assessed.
- Other jurisdictions should be examined for ideas.

Cooperation and Coordination

- Conflicting government programs and polices should be reconciled at all levels.
- Cooperation should be increased at all levels of government.
- All government and private programs relating to wetlands should be integrated in the long term.
- Government programs and policies should be coordinated to eliminate disincentives to wetland protection.
- Agricultural, water management and environmental programs should be coordinated.
- The provincial and federal governments should communicate regarding wetlands.

Legislation

- Legislation should be used to protect upland areas and wetlands.
- The wetland policy should be legisltated.
- Legislation should override ministerial discretion.
- The Water Resources Act should be modified to include allocations for wetlands.
- The wetland policy and new environmental legislation should be related.
- Federal boating regulations should be changed.
- Legislation and immigration policy should reflect a better land ethic.

Enforcement

- Illegal ditching must be stopped by the government.
- Stronger enforcement of existing policies and regulations is required.
- Enforcement should not be subject to political manipulation.
- Regulation and enforcement of the policy should be applicable to individuals and all levels of government.
- Enforcement should be a provincial rather than municipal responsibility.

Policy Implementation

- A system of assessment and monitoring is required.
- A simple policy with teeth and no loopholes is required.
- All existing policies, such as subdivision development policies, should be restructured to accommodate the final wetland policy.
- The policy needs public and government support including funding.
- The policy should be consistently implemented.
- The policy must have the power to stop

drainage.
- Local governments should be provided with the necessary tools and resources to comply with the policy.
- New initiatives should be implemented gradually.

Two Hills

A public workshop was held in Two Hills on the evening of November 20, 1990. The 16 registrants were organized into 3 groups and provided 95 recommendations that are summarized in the following categories:

Societal Responsibility

- Society should pay for benefits from wetlands.

Value of Wetlands

- The different values of wetlands to society should be recognized.
- The value of wetlands to agricultural production should be recognized (i.e. moisture retention).

Focus of Wetland Policy

- A practical, common, user friendly wetland policy is required.
- The wetland management policy should be flexible to recognize unique local situations.
- The overriding mandate of the policy should be that wetlands are precious non-renewable resources that should be protected and preserved.
- All stakeholders should be involved in wetland management.

Inventory

- All wetlands and productive land should be evaluated.
- An inventory of wetlands in the settled area should be completed with emphasis on the area north of Camrose.

Wetland Definitions

- Wetlands and wetland habitats should be defined.
- The natural wet and dry cycles of wetlands should be recognized.
- Definitions of permanent and nonpermanent wetlands are required.

Management Objectives

- Specific guidelines and objectives should be developed for different types of wetlands.
- Multiple use for agriculture and wildlife should be encouraged.
- Nonpermanent wetlands are important and should be protected.
- The ecological value of wetlands should be maintained without loss to the individual landowner.
- Agriculture and wildlife can co-exist.
- The government should adopt a no-net-loss policy for wetlands with basins as the management unit.

Education

- The general public should be educated about the value of wetlands particularly nonpermanent wetlands.
- Producers should be educated about wetland values to preserve wetlands and minimize impacts.

Drainage

- Drainage is unacceptable to wildlife and agriculture.
- Government subsidies of drainage should be eliminated.
- Wetlands should be protected from drainage.

Wetland Consolidation

- Slough consolidation to improve agricultural efficiency and preserve wildlife habitat should be considered in some areas.
- Pothole consolidation is another form of drainage and should not be allowed.

Compensation and Incentives

- Fair and adequate compensation should be provided to landowners if they are required to protect wetlands.
- Grain quotas should be based on the total of cultivated and uncultivated acreage (i.e. wetlands) to encourage wetland preservation.
- Compensation should be provided for planting shelterbelts.
- Tax credits, subsidies and financial incentives should be provided to farmers to encourage wetland preservation.

- The public and those who benefit should contribute to compensation costs.

Public Land and Wetlands

- Wetlands on public land should be retained in public ownership.
- The government should purchase selected key wetlands.

Water Management

- Controlled water management is required.
- Retention of surface water should be encouraged.
- The difficulty of managing land next to wetlands when water levels fluctuate should be recognized.

Research

- Impact of chemical pollution on wildlife and wetlands should be studied.
- Biological control should be investigated.

Wetland Ownership

- Ownership of wetlands should be clarified.
- Wetlands should be protected by title.

Landowner Involvement and Rights

- Landowners should be allowed to manage their land for wildlife and hunting.
- Hunting and trespass laws should be improved.
- The wetlands policy should not overly restrict landowners' ability to manage their land or create additional costs.
- The impacts of wetland management on individuals should be recognized.
- Landowners should directly benefit from wetlands on their land.
- The government should work closely in cooperation with landowners regarding wetlands.
- Wetlands management plans should be developed jointly with landowners.
- The contribution of landowners to wildlife habitat protection should be recognized.
- Hunting licences should be more restrictive to give landowners trespass protection.
- Hunters should pay more to landowners.
- Economic conditions force farmers to use all available land for production.

Management Agencies and Responsibilities

- A wetlands review board should be established independent of political influence.

Wetland Degradation and Pollution

- Degradation of wetlands should be stopped.
- Use of chemicals and pesticides around wetlands should be controlled.
- Farmers should be encouraged to use biological rather than chemical control.

Wetland Margins

- The value of land surrounding wetlands should be recognized.

Land Clearing

- Tree cover should be maintained to help maintain wetlands and watershed quality.
- Shelterbelts should be retained to ensure economical farming.

Specific Management Suggestions

- Productive land should remain in agriculture.
- Urban expansion should be limited.
- Balanced wildlife management is needed.
- Counties should have an environmental officer.
- The public should be involved in development of sanctuaries and wetlands.
- Conservation easements and covenants should be allowed to protect wetlands and wildlife habitat.
- Hunting fees should be designated to specific areas for better wildlife management.
- A fair approach to hunting should be used (e.g. bow and arrow).

Cooperation and Coordination

- Better coordination and cooperation and a common sense of direction are required for wetland management.
- Existing government and private resources should be organized and process should be streamlined.

Legislation

- Legislation is required to protect wetlands.
- Enforcement is needed to ensure wetland protection.

Bonnyville

A public workshop was held in Bonnyville on the evening of November 20, 1990. The 16 registrants were organized into 4 groups and provided 95 recommendations that are summarized in the following categories:

Societal Responsibility

- People that receive direct benefits from wetlands should support them.
- Taxpayers (i.e. society) should support wetlands because water is the key of life.
- The political will to establish and implement a wetland policy is required.

Value of Wetlands

- Better public recognition of wetland values is required.
- Wetlands should be too valuable too drain.
- Industrial, urban, rural and tourism uses of wetlands and wetland values should be examined.
- Landowners should recognize the inherent values of wetlands.
- The tourism value of wetlands should be promoted to benefit local economies.

Focus of Wetland Policy

- The government should establish a policy to increase wetland preservation and enhancement.

Inventory

- The government should conduct an inventory of permanent and temporary wetlands.
- Satellite imagery should be used for wetland inventory.

Management Objectives

- Specific regional goals for wetland management referred to in the third wetland management strategy should be clarified.
- The amount of wetlands to be maintained needs to be determined.
- Wetland management options that provide an economic return to farmers, such as wild rice and trout raising, should be considered.
- Wetlands should be preserved for tourism opportunities such as bird watching.
- Significant wetlands require site specific management.
- The government should institute a policy of no-net-loss of permanent and temporary wetlands.
- Lost or damaged wetlands should be replaced with wetlands of similar quality.

Wetland Definitions

- The definition of wetlands should be improved.
- A definition of recurrent wetlands should be developed.

Education

- Producers, politicians and the general public should be educated about wetland values and impacts.
- Elementary, post secondary and adult education programs are required to help people understand the relationships between wetlands and groundwater, erosion and the environment.
- The media should be used to increase awareness about wetlands.
- Education should be used to get compliance to a no-net-loss policy.

Drainage

- The third policy statement on drainage of nonpermanent wetlands should be clarified.
- The government should stop or significantly reduce wetland drainage.
- Public review and economic analysis, including cost/benefit analysis, should be completed at the planning stage of drainage projects.
- All aspects of drainage should be examined.
- Drainage incentive programs should be reconsidered.
- The cost sharing formula for drainage should be 50:50 not 86:14 so that landowners pay more of the cost of drainage.
- The impact of drainage on wildlife and groundwater should be considered.
- Major drainage programs should not be started.

Wetland Consolidation

- Consolidation is another form of drainage and should not be allowed.
- Funding for slough consolidation should be continued.

Wetland Creation and Restoration

- Existing wetlands should be enhanced.
- Water resistant tame grass and trees should be planted in dry wetlands to improve the margins and water retention.
- Creation of wetlands should be encouraged when gravel pits and coal mines are being reclaimed.
- Dry wetlands should be restored in appropriate locations.

Compensation and Incentives

- Landowners should be compensated for protection of wetlands or upland habitat on private land.
- Responsibility for compensation should be shared between government and private organizations.
- Land within the permanent cover program should be included in grain quota acreages.
- Compensation should be used to enforce agreements between landowners, private groups and the government.
- Financial disincentives to wetland retention such as taxation, should be removed.
- Taxes should be revised to act as an incentive for wetland retention.
- Alternatives to cash payments to landowners as incentives for wetland retention should be considered.

Public Land and Wetlands

- The government should investigate retirement of some marginal land to wildlife habitat (e.g. permanent cover program).
- Marginal public land with significant wetlands should be retained or purchased.
- Weed control on public land should be improved.

Water Management

- Industrial impacts on water, including withdrawal from lakes and wells, should be addressed.
- Wetlands should be conserved to protect surface and ground water.
- The North Saskatchewan River pipeline should be built.
- The government should recognize the importance of water.

Research

- Financially feasible management alternatives for wetlands should be studied.

Wetland Ownership

- Ownership of wetlands on private and public land should be determined.
- Permanent wetlands are Crown and should not be drained.
- Landowners should be involved in discussions of wetland ownership and in dealing with the consequences.

Wildlife Damage

- Landowners should be compensated for damage by waterfowl, deer and coyotes that are associated with protected wetlands.
- Compensation for waterfowl crop damage should be 100 percent.
- The crop damage compensation program should be enhanced to complement wetland protection initiatives.

Management Agencies and Responsibilities

- An autonomous body should be established to deal with drainage on public lands or publicly funded projects.

Roads

- Control and monitoring of road construction across wetlands should increase.
- Dugouts should be used to replace wetlands lost during road construction.
- Traditional straight-line road construction should be modified to protect wetlands.
- Filling of wetlands during road construction should be monitored by government departments other than Alberta Transportation and Utilities.
- The impact of road and ditches on wetlands should be carefully considered.

Specific Management Suggestions

- Better control and management of wetlands is required.
- Government programs and grants that destroy habitat and wetlands should be stopped.
- Non-game birds should be recognized in regulations and protected areas.
- Non-game birds such as trumpeter swans and pelicans should not be disturbed by hunting.
- Hunting licence fees should be increased and the

funds directed to landowners for habitat development.
- Responsibility for weed control around semi-permanent wetlands should be determined.
- Budget priorities and government resources should be directed to the wetland policy.
- Marginal land should not be developed.

Cooperation and Coordination

- Conflicting government programs within and between departments should be resolved.
- Interdepartmental coordination and cooperation are required.
- Government management mandates should be clarified and consolidated.
- Problems of one group trying to protect a wetland while another is trying to destroy it should be resolved.
- Unification of the departments of Economic Development, Tourism, Environment and Agriculture regarding wetlands is required.

Legislation

- The orientation of legislation should be changed from development to management.
- Strong legislation is needed to ensure implementation of the policy.

Barrhead

A public workshop was held in Barrhead on the evening of November 22, 1990. The 48 registrants were organized into 6 groups and provided 179 recommendations that are summarized in the following categories:

Societal Responsibility

- Society must pay the cost of conservation and maintenance of wetlands.
- Society should pay for compensation for wildlife damage of crops.

Value of Wetlands

- Wetlands should be seen as a valuable resource rather than a detriment.
- The value and purpose of wetlands should be determined.
- Other potential uses of wetlands should be recognized.
- The significance of wetlands should be defined (e.g. the percentage of ducks that are produced in the settled area).
- The value of wetlands should be determined by the government.
- The value of other uses of wetlands should be recognized and considered.

Focus of Wetland Policy

- Wetlands should be conserved.
- Wetland losses must be determined to confirm that a problem exists.

General Management Approach

- Prevention is a better approach than patching up problems when they occur.
- Management should take a broad rather than piecemeal approach.

Inventory

- Evaluation of the agricultural potential of wetlands should be improved.
- Wetlands should be categorized on the basis of their intrinsic value.
- Environmentally sensitive wetlands should be identified.
- Wetlands should be ranked according to their values and any use should be restricted in key wetlands.
- The government should do a comprehensive inventory, classification and evaluation of wetlands on private and public land on an ongoing basis.
- Necessary wetlands and recharge areas should be identified and preserved for wildlife and groundwater protection.

Wetland Definitions

- A better definition of wetlands is required.
- Peatland should be defined and considered as part of the wetland system.
- A wetland should have standing water but may be dry some years.

Management Objectives

- Priorities for management of wetland resources should be set.
- Wetlands and tree cover should be maintained.

- Guidelines and objectives for wetland management should be developed.
- A percentage of wetlands should be retained in a natural state when a quarter section is developed.
- Important wetlands should be identified and protected under legislation with compensation of landowners if required.
- Representative samples of each type of wetland should be retained.
- Certain wetlands should be restricted from all development.
- A policy of no-net-loss of wetland functions, such as water discharge, flow control and wildlife habitat, is required.

Regional and Local Differences

- The wetland policy should be area or site specific to reflect different needs and conditions throughout the province.
- Different management strategies will be required in different areas.

Education

- Landowners, special interest groups and the general public should be educated about the value and benefits of wetlands.
- Public education should be used to make information about wetlands and habitat protection more available.
- Education is better than increasing taxes to pay for wetland management programs.
- Guidance and advice about wetland management should be provided to landowners.
- Education should include the economic development, groundwater, wildlife and aesthetic values of wetlands.
- Public awareness of the regulations relating to drainage should be improved.
- Educational materials should be based on scientific fact.
- The agricultural sector should be educated about conservation.
- Landowners should be educated to ensure they understand the wetland policy.

Drainage

- Drainage should be called water management.
- Local, provincial and federal government incentives or funding for drainage should be removed.
- Channels from slough drainage create an erosion problem and should be controlled.
- A landowner that benefits from drainage should be responsible for all off-site costs.
- The impacts of drainage on the surrounding land should be recognized.
- Drainage in environmentally sensitive areas should be supervised by a non-government management body such as the Peat Soils Association.
- A moratorium on drainage should be placed until all existing cultivated land is used and a wetland inventory is completed.
- Drainage of permanent and temporary slough marsh on private land should be permitted unless it is not in the public interest.
- The implications of draining wetlands and alternatives should be considered (e.g. cost/benefit analysis).
- Money for drainage assistance should be shifted to wetland and habitat protection.
- Illegal drainage should be addressed.
- Some wetlands can be cultivated and are productive if drained.

Wetland Consolidation

- Consolidation should be the preferred method if drainage occurs.
- On farm wetland consolidation should be encouraged.

Compensation and Incentives

- Financial and other incentives should be provided to landowners to encourage wetland retention and good land management.
- Tax concessions, public recognition and signage should be used as incentives.
- Tax breaks should be indicated on assessment forms.
- Support for programs such as Buck For Wildlife should be increased.
- Private stewardship should be promoted through small incentives and recognition.
- Increased crop insurance premiums as a result of farming on marginal lands should be considered.

Public Land and Wetlands

- Crown land should be left as it is.
- Crown lands with large areas of wetland or muskeg should not be sold for cultivation but could be leased for grazing.
- A moratorium on sale of Crown lands is

required to stop the sale of wetlands.
- Marginal land should be returned to the government where feasible.
- Public wetlands should be maintained unless the government determines that drainage is for the public good.
- Significant wetlands should be owned by the public and could be purchased at fair market value.

Public Access

- Landowners should have the right to restrict public access to protected wetlands on private and leased land.
- The status of public access to land that is removed from the tax roll should be determined.

Water Management

- Water should be managed on a regional or basin basis.
- Water quality standards should be set to protect the environment including fish, wildlife and vegetation.
- Groundwater should be preserved.
- River and creek banks should not be destroyed to allow discharge of urban effluent (e.g. Wabash Creek and the Town of Westlock).
- Rivers should be controlled using storage reservoirs that could be used to generate electricity.

Research

- Wetland ecosystems should be studied using all available information.
- Wetland management in other jurisdictions should be examined.
- Research plots should be established on peatlands to determine suitable crops and agricultural methods.

Landowner Involvement and Rights

- Landowners should have control on deeded land and should be allowed to manage resources such as water in the best way possible on their land.
- The government should make people aware of wetland benefits but the landowner should have control or the "majority say".
- Farmer rights should be protected.
- Government intervention should be minimized.
- Some control is required so that farmers cannot always do everything they want.
- Landowners and government should cooperate to develop management plans for critical wetlands.
- Private management of wetlands should be encouraged.
- Landowners should be allowed to charge for public use under prescribed guidelines.
- Wetland management proposals should be discussed with landowners.

Wildlife Damage

- Compensation for crop damage by wildlife should be 100 percent.

Management Agencies and Responsibilities

- A body that has the power to manage wetlands should be formed.
- Local governments should be involved in wetland management.
- Local participation in wetland management should be encouraged.
- Someone other than landowners should decide about wetland protection and drainage.

Scope of the Policy

- The wetland policy should address the entire province.

Wetland Margins

- Buffers of native vegetation should be maintained around waterbodies.
- Wetland conservation should consider the margins and drainage channels.

Land Clearing

- Tree cover should be maintained.
- New areas should not be opened to homesteading.
- Bush should be maintained along waterways if new land is opened up.
- A permit or licence from the local authority should be required for clearing on private land.

Peat

- Peatland development for agriculture should be stopped.
- Awareness of the various uses of peat should be increased.

- Management of peatlands and marginal lands should be improved.
- Some peatlands should be left in a natural state.
- Productivity of peatlands should be increased.

Specific Management Suggestions

- Land use activities such as cottage development and agriculture should be controlled along lake and rivers.
- Wetlands should be managed as part of a larger ecosystem.
- A designated wetland should not be cultivated even if it dries up.
- Sewage disposal facilities should be integrated with wetlands where possible.
- Use of herbicides and pesticides should be reduced.
- Municipalities should be informed about potential damage from ditch construction.

Coordination and Cooperation

- Government should have a coordinated, dedicated approach to wetland management.
- Government should assume a leadership role in establishing policies and coordinating its efforts.
- Existing programs should be streamlined and coordinated to eliminate conflicts.
- All government agencies should agree on a common approach to management of a specific wetland.

Policy Implementation

- The final policy should have teeth and be enforced.

Grande Prairie

A public workshop was held in Grande Prairie on the evening of November 26, 1990. The 30 registrants were organized into 4 groups and provided 145 recommendations that are summarized in the following categories:

Societal Responsibility

- Society should pay for the benefits it receives from wetlands.

Value of Wetlands

- The costs of wetland retention should be determined.
- Economic values that would be available to landowners should be investigated.
- Wetlands have value beyond economics.
- The value of wetlands for water purification, water table maintenance, water storage and release, micro-climate stabilization, waterfowl and wildlife habitat and genetic reserves should be recognized.

Focus of Wetland Policy

- The policy has to be mitigated so that everyone will know the final costs.
- A clear, concise policy that can be interpreted by landowners, governments and the public should be developed.
- One policy should be prepared for all government departments.
- Existing wetlands should be preserved and protected for the future.
- The policy should be directed at individuals and departments that are most affected (e.g. farmer and Public Lands Division).

General Management Approach

- Environmental management should be consistent (e.g. environmental impact of Oldman Dam versus wetland policy).
- Government decision making regarding wetlands should be streamlined.
- More money should be spent on prevention rather than on reaction.
- Government inconsistency in development of policy should be recognized (e.g. industry licences are granted without public hearings).
- The public should be involved in wetland management.
- The quality of wetlands should be monitored.
- Social and economic consequences should be evaluated before wetland development.
- The costs, benefits, consequences and impacts of wetland management should be determined.
- Government should institute policies that affect wetlands on private land.

Wetland Planning

- Comprehensive water and wetland management planning should be completed.

Inventory

- An inventory of existing wetlands should be completed.
- Urban and forested areas and acreages should be considered in a wetland inventory.
- Wetlands should be classified under land use orders or zoning.

Wetland Definitions

- Wetland type and value should be defined (e.g. trumpeter swan habitat).

Management Objectives

- Diversified management of lands while maintaining wetlands for water purification and wildlife habitat should be considered.
- The definition of multiple use should be redefined because some uses are mutually exclusive and cannot overlap.
- Agricultural use of better land should be intensified and marginal lands should not be developed.
- Compatible agricultural uses should be allowed on retained wetlands.

Regional and Local Differences

- Regional differences should be strongly recognized in wetland management.

Education

- Urban residents should be educated about wetland management changes and farmer cooperation.
- The general public should be educated about wetland types and values.
- Landowner awareness of soil and water conservation programs (e.g. shelterbelt program) should be improved.
- Land appraisers should be informed about wetland values.
- School and extension programs should be used to inform the public about wetland management.
- Technical assistance regarding wetland management should be provided to farmers.

Drainage

- Drainage programs should be clarified or stopped.
- Drainage of nonpermanent wetlands should be allowed subject to development permit.
- Drainage of nonpermanent wetlands should be allowed for grazing or haying if the character of the wetland is not changed.
- Government support of drainage should be stopped.
- Farmers should be encouraged to drain wetlands.
- Government funds should be reallocated from drainage to wetland management.
- Consolidation should be encouraged if drainage is allowed.

Compensation and Incentives

- Landowners should be fairly compensated if they must protect wetlands on their land.
- Incentives to protect wetlands and wetland margins should include monetary compensation or tax breaks (i.e. property or income tax).
- The tax assessment system should be revised to accurately reflect land values for agriculture versus wetland maintenance.
- Incentives for farmers to drain wetlands such as increased farm efficiencies should be determined.
- Landowners should be consulted on any compensation programs.
- Farmers should be reimbursed for lost production because of wetland retention.
- Compensation should be provided to landowners who voluntarily retain wetlands.

Public Land and Wetlands

- Leasing of public lands with wetlands and other alternatives to direct purchase should be considered.
- Environmentally sensitive and critical wetlands should be purchased.
- Caveats should be placed on revested lands to protect wetlands.
- A local board should determine a fair market value for wetland purchases.
- Wetlands on public land should be maintained in public ownership.

Public Access

- The public should have access to publicly owned wetlands.
- Landowners should be allowed to control access to wetlands.

Water Management

- A comprehensive water management plan should be prepared for each watershed.
- An appeal procedure and board with peer membership should be established for water management projects and land use decisions.
- The downstream effects on private land of water management projects should be considered.
- Water should be controlled in the watershed.
- Resource planning on public land should maintain watershed protection and encourage it on private land.
- Government expenditures on the Oldman Dam should be justified.
- Water quality should be maintained.

Wetland Ownership

- Ownership of wetlands should be defined.
- Controls should be applied when land changes hands.

Landowner Involvement and Rights

- Landowners' rights to drainage should be recognized.
- Retention of wetlands on private land should be on a voluntary basis.
- The impacts of wetland management on private land should be considered (e.g waterfowl depredation and compensation).
- Landowner rights should be respected by using incentives for wetland protection rather legislation.

Wildlife Damage

- Adequate compensation should be provided to landowners for wildlife damage from wetland and watercourse management (e.g. beaver damage).
- Beaver should be managed at the local level to avoid flooding of agricultural land.
- Existing compensation for crop losses to waterfowl is inadequate.
- Regional differences should be recognized in compensation programs (e.g. duck depredation).

Management Agencies and Responsibilities

- Someone must manage wetlands.
- One agency should have the mandate to manage wetland programs, administer and simplify acts and regulations and conduct regular wetland inventories.
- Wetland management should be assigned to an existing department such as Fish and Wildlife Division rather than creating a new department.
- The role of the Alberta Forest Service in wetland management should be increased.
- A division of Alberta Environment Water Resources should manage wetlands.
- Fair representation on the Alberta Water Resources Commission from all areas of the province including farmers is required.
- Alberta Transportation and Utilities doesn't have the mandate to manage water and Alberta Environment must repair damages.
- Wetland management responsibility should be maintained at the local level (e.g. county) to recognize regional differences.

Scope of the Policy

- A wetland management policy is required for the entire province not just the settled area.
- The policy should be tried in the Green Area where farmers will not be affected.

Roads

- Road planning and construction should be improved to reduce adverse effects on wetlands and water movement.
- Alberta Transportation should be accountable for watershed damages.

Wetland Margins

- The government should negotiate with landowners to maintain wetland margins.

Land Clearing

- Tree cover should be maintained to support river flows and maintain wetlands.
- The effects of upstream forest harvesting and agricultural clearing should be recognized.

Specific Management Suggestions

- Caveats on land titles should be used to reflect tax arrangements to protect wetlands from development.
- Weed control may be a reason for drainage and should be improved.
- An environmental impact assessment should be

conducted prior to wetland development on public land.

Cooperation and Coordination

- Government programs should be consistent and conflicts should be resolved.
- Cooperation should be used rather than regulations (i.e. carrot rather than stick).
- Government departments should cooperate to develop a consensus and set priorities.
- The government should cooperate with private groups such as Ducks Unlimited.

Legislation

- A legislated framework for resolving conflicts should be developed.
- Legal agreements with landowners to preserve wetlands should be negotiated.

Policy Implementation

- The public lack of confidence in the government's ability to implement the policy should be recognized.

McLennan

A public workshop was held in McLennan on the evening of November 27, 1990. The 15 registrants were organized into 3 groups and provided 88 recommendations that are summarized in the following categories:

Societal Responsibility

- The general public should bear the costs of wetland preservation.
- Private and public funding should be provided for wetlands.

Focus of Wetland Policy

- The government should set wetland management as a high priority.
- The wetland policy should be realistic and enforceable and must recognize that most wetlands are privately owned.
- The political will to back the policy is required.

General Management Approach

- The local public should be involved in wetland management decisions.
- Decisions on compensation and drainage permits should be made at the regional level.
- Decision making on wetlands should be open and local and should avoid appeals to a higher political level.

Inventory

- Wetlands within the entire province should be inventoried and evaluated to help determine the best use for each wetland.

Management Objectives

- Development of bird watching should be supported.
- The economic value of wetlands for tourism should be recognized.
- Wetland preservation may be the best use in some cases.
- No-net-loss of permanent wetlands should be the policy.

Education

- Local education programs are required to increase awareness of the range of wetland values.
- Wetland values should be communicated to politicians, government, urbanites and landowners.

Drainage

- The government should not be paying for drainage on private land.
- The difference between flood control and drainage should be determined.
- Incentives for drainage should be changed to incentives for wetland retention.

Compensation and Incentives

- Farmers should be compensated for retaining wetlands by reducing taxes on permanent wetlands.
- The provincial government should reimburse municipalities for revenue losses as a result of wetland incentive programs.
- Grazing lease holders should be compensated to

move them from the edge of waterbodies.

Public Land and Wetlands

- Wetlands on public or leased land should not be sold for farming.
- Quarter sections with sloughs should not be sold.
- The bed and shore provisions of the Public Lands Act that designate permanent wetlands as Crown land should be recognized.
- Some agricultural dispositions should be returned to natural areas or wetlands.
- The government should buy and manage major wetlands.
- Crown lands should not be used for ranching or farming.

Water Management

- Lakes should be maintained at standard levels (e.g. Kimiwan and Winagami).
- Solutions to historic water management problems are required and may differ from the wetland policy.
- Leases around waterbodies should be restricted to allow water level control.
- Land use should be regulated and agriculture should not be permitted along lake shores.
- Distribution of money for water management between northern and southern Alberta should be more equitable (e.g. $1 million in the north versus $300 million in the south).
- The effect of redistribution of funds for water management programs such as the Alberta Water Management and Erosion Control program should be determined at the district level.
- Decision making on a watershed basis should be encouraged.
- Major flood control projects should include plans for wetlands including wetland drainage and should consider erosion problems.

Research

- The government should get on with practical solution rather than spending a large amount of money on research.

Wetland Ownership

- The government should not restrict activities on private land within reason.
- Wetlands on private land should be left in the farmers' hands.

Wildlife Damage

- Compensation for crop losses from waterfowl should be increased or the government should buy back land that is prone to problems.
- Feeding stations should be established in trouble areas.

Management Agencies and Responsibilities

- Management of wetlands should be made non-political by using a local, elected, decision making body under provincial guidance.
- An organization such as the Alberta Water Resources Commission or Alberta Environment should manage wetlands.
- A single agency at the regional level should provide overall management of wetlands.
- A wetland management organization should review legislation, inventory and monitor wetlands and provide guidelines to an approving authority.
- A regional decision making body should include interest groups, farmers and environmentalists.

Scope of the Policy

- Activities in the Green Area that affect wetlands in the White Area should be considered and managed.
- Wetlands in the non-settled area should be considered for protection.

Wetland Margins

- Wetlands should be considered in connection with surrounding uplands and vegetation.
- Buffer areas around important wetlands should be acquired to protect the wetlands from encroachment.

Specific Management Suggestions

- Zoning should be used to set uses for wetlands (e.g. environmental reserves to restrict land use on private land).
- Wetlands should be managed on a watershed or basin basis.
- A management plan should be developed for each significant wetland.
- Regional and site specific differences should be recognized in establishing wetland policies.
- People should be encouraged to gift significant wetlands to the government.

- The government should regulate land use around waterbodies to control impacts on waterfowl and wildlife habitat.
- Good forest management is needed.
- Farming should be controlled to reduce impacts on waterfowl and wildlife particularly around small lakes.
- Agricultural standards for weeds should not automatically be applied to wetlands.
- Cost/benefit analyses are needed to make wetland management decisions.

Cooperation and Coordination

- Greater coordination and cooperation in wetlands management are required.
- Cooperation should be emphasized over regulation.
- Cooperation with and funding of wetland retention by private organizations should be encouraged (e.g. Ducks Unlimited).

Policy Implementation

- The government should provide adequate staffing for wetland and lakeshore management.
- A new policy is needed and some programs should be dropped.
- The policy should be enforced and implemented to be effective.
- The government should enforce existing policies and programs.

Fairview

A public workshop was held in Fairview on the evening of November 28, 1990. The 34 registrants were organized into 5 groups and provided 182 recommendations that are summarized in the following categories:

Societal Responsibility

- Society as a whole should help pay the costs of preserving wetlands.
- The user pay approach for natural resources should be emphasized.

Focus of Wetland Policy

- A wetland policy is needed because of downstream effects of water.
- A comprehensive policy should be developed and reflected in regulations.
- A policy that works today because of depressed farm markets may not work when the agricultural industry improves.
- The policy should be fair, practical and acceptable to rural landholders.
- The policy should protect sensitive areas and wildlife habitat for the use and enjoyment of future generations.

General Management Approach

- A carrot is a better approach than a stick.
- Procedures for determining wetland management priorities should be established.
- Wetland management guidelines should recognize the need for development such as roads and irrigation.
- Negative impacts should be minimized.
- Local involvement should be balanced with a larger perspective.
- Restrictions on private use of wetlands should apply to the government as well.
- Flexibility in wetland management should be maintained.

Wetland Planning

- Coordinated planning of wetlands is needed. Municipal zoning for wetlands should be considered.

Inventory

- An of inventory of wetlands by type, size and permanence is needed.

Wetland Definitions

- Clear definitions of the different types of wetlands should be developed.
- Size, type and permanency of wetlands should be defined.

Management Objectives

- Firm goals and objectives for wetlands should be established.
- Key wetlands should be maintained.
- Agricultural use of wetlands should be considered.
- Birds and wildlife should be preserved.

Regional and Local Differences

- The policy should recognize different wetland types, priorities and situations.
- The policy must be flexible to recognize regional differences, new technology, changes over time and varying wetland attributes.

Education

- Education and assistance programs to prevent, control and repair soil erosion should be increased.
- The public and governments should be educated about wetland values and management issues from a variety of perspectives.
- Wetland users should educate the public.
- Education rather than rules and legislation should be used to convince the public to protect important wetlands.
- Free public seminars should be used as an incentive to protect wetlands.
- Government should provide wetland management information and advice to landowners.
- Farmers, engineers, politicians and civil servants should be educated about wetlands.
- Training and education for water resources engineers should be improved.

Drainage

- Drainage on private land should be controlled and/or licensed.
- Drainage licensing processes should be streamlined.
- Drainage of major water routes should be improved.
- Landowners should be responsible, at least partially, for the consequences of on-farm drainage.
- Water movement on the farm should be allowed so long as the inlet and outlet are not altered (e.g. slough consolidation).
- Small scale drainage of sheetwater or depressions that would dry within 5 to 10 days of seeding should be allowed.
- Drainage of lowlands into aquifers should be stopped.

Wetland Creation and Restoration

- Criteria to determine the potential for restoration of drained wetlands should be developed.

Compensation and Incentives

- The tax burden for wetland retention should not be borne by landowners.
- Compensation should be provided for seasonal wetlands on private land.
- Transfer payments should be used as an incentive to retain wetlands.
- Compensation could include direct payments, tax incentives, land trades and public recognition.
- Landowners should be adequately compensated for wetland retention.
- Farmers should be compensated for losses that result from wetland management.
- Eligibility for agricultural subsidies should depend on wetland protection efforts.
- An index formula should be developed for compensation.

Public Land and Wetlands

- Permanent wetlands should be purchased from farmers so they don't feel compelled to drain them.
- Private lands with valuable wetlands should be purchased or leased by the government.
- Wetlands on public land should be protected using watercourse agreements before the land is sold.
- Crown lands with marginal agricultural capability or significant wetlands should not be released.
- Development of Crown land should be coordinated.

Public Access

- Public access to permanent wetlands that are surrounded by private land should be determined.
- The size of wetlands that should be regulated with respect to public access should be defined.

Water Management

- A comprehensive water management policy should be established for northwestern Alberta.
- Water management projects should be coordinated to minimize impacts and build on opportunities.
- Flooding of private land should be controlled (e.g. along Little Burnt River).
- Water level control structures should be provided on wetlands.
- Better forethought and planning are required to

address water management problems.
- Farmers should not be negatively affected by water management projects.
- Public funding for water management in the north (i.e. drainage) should equal funding for water management in the south (i.e. irrigation).
- Water channels should be maintained by removing beaverdams, brushing and removal of logjams.
- Water management should recognize regional differences and should be cost effective (i.e. reasonable in comparison to the value of land in the area).
- Funding for on-farm water management should be provided to farmers.

Research

- Awareness of interactions between wetlands and aquifers is required.
- Research should be done on the effects of agricultural chemicals on wetlands.
- The effects of various activities on wetlands should be determined.
- Research on methods for safe, effective water conveyance is required.

Wetland Ownership

- Livestock access to wetlands that are removed from private title should be defined.
- Wetland designation should be permanent and binding on future ownership.
- Municipal zoning could be used to define wetland boundaries.
- Landowners feel they own wetlands because they are valued at $50 per acre by registered appraisers.
- Wetland ownership should be clarified and the information provided to the public.

Landowner Involvement and Rights

- Wetlands should be managed jointly and in cooperation with landowners.
- Cooperation among landowners should be encouraged.
- Habitat protection agreements should be negotiated with landowners.
- Landowners should have input into water management decisions that affect them.
- The approval of surrounding landowners should be obtained before wildlife sanctuaries are established.
- Government management of wetlands and intervention on private land should be minimized.

Wildlife Damage

- Adequate compensation for waterfowl crop damage should be provided especially if waterfowl levels are increased by wetland retention.
- Compensation should be 80 percent of actual production with no salvage adjustment as agreed to by farmers and adjusters.

Management Agencies and Responsibilities

- Wetland and water management authorities should be formed for relatively small areas such as improvement districts and municipal districts.
- Local authorities should have more control of water management decisions and funding.
- Local landowners, councils and governments should be involved in determining wetland management priorities.

Scope of the Policy

- A wetland policy should be developed for the entire province.

Wetland Degradation and Pollution

- The level of chemical, sewage and industrial contamination of wetlands should be determined.

Wetland Margins

- Buffer zones around wetlands should be considered. Marginal lands around wetlands should be leased from landowners for wildlife habitat.
- Fringe habitat around a consolidation area should be maintained.

Land Clearing

- Land clearing and development should be controlled.
- Logging should be limited to small cutblocks.
- Land clearing in both the Green and White areas should be limited.
- The impacts of timber harvesting and clearing land for agriculture should be considered.
- Permits should be required for bush removal.

- Areas of bush should be maintained on Crown land that is sold.

Specific Management Suggestions

- The government should consider expropriation to solve a problem in the public interest.
- A resource tax on timber or oil should be considered to pay for wetland management.
- The size of fields should be minimized to provide water retention and windbreaks.
- Better beaver management is required in some areas.
- Responsibility for weed control around wetlands should be assigned.
- Designated wetlands should be reassessed periodically.

Cooperation and Coordination

- Crown land development should be coordinated.
- Effects of actions by the Alberta Forest Service, Agriculture and Environment should be anticipated.
- Cooperation and coordination regarding road construction should be improved.
- Government policies should be coordinated.
- The wetland policy should be consistent across government departments and should apply to all private and public activities that affect wetlands.

Enforcement

- Strict enforcement of the final policy is required to encourage education and compliance.

Policy Implementation

- The new policy should be implemented and enforced.
- Responsibility for enforcement and necessary funding should be determined.
- Rules with teeth are required.

Fort Vermilion

A public workshop was held in Fort Vermilion on the evening of November 29, 1990. The 22 registrants were organized into 3 groups and provided 85 recommendations that are summarized in the following categories:

Societal Responsibility

- The costs of wetland preservation should be borne by the public as a whole.

General Management Approach

- The political solution should be avoided in wetland decision making.
- Resource management policies should not be politically swayed.
- The government can't make everyone happy all the time.
- Decision making should be tied to the people who are affected by the decision.
- Wetland decision making should be local within a general policy framework.
- Wetland management should be at the regional or local level (i.e. regional planning commissions or agricultural service boards) to fully recognize regional differences.

Inventory

- A wetland classification scheme is needed.
- Wetlands that are valuable for waterfowl, hydrology, aesthetics, and endangered species should be identified.

Management Objectives

- Isolated wetlands in farming areas should not be maintained or enhanced because of problems with crop depredation by waterfowl.
- Sizeable wetlands should be maintained even in farming areas.
- Wetlands should be assessed and managed for the best use which in some cases may be no use.
- Agricultural development and wetland management should be balanced.
- Site specific criteria for wetland management should be developed within the policy.
- The province should be divided into wetland management regions.
- Wetland habitat should be designated in non-agricultural areas to avoid problems with crop depredation by waterfowl.

Regional and Local Differences

- The policy should recognize regional differences in wetland values.
- The policy should allow for management of wetlands on an individual basis.

Education

- Education and awareness of wetland values among landowners and the general public should be improved.
- The public should be made aware of landowner concerns about wetlands.

Drainage

- Careful planning and a permit should be required before any drainage or ditching is done.
- Penalties for illegal drainage should be applied.
- Sheetwater and small sloughs should be drained from agricultural land to make it viable for farming.

Compensation and Incentives

- Tax rebates should be provided to landowners through local governments to encourage wetland retention.
- Water levels should be controlled or adjacent landowners should be compensated for flooding if wetlands are retained for the public good.
- Wetlands on private land should be retained through government and landowner negotiation with appropriate compensation.

Public Land and Wetlands

- Crown land with excessive water on it should not be released for farming.
- Wetlands on crown land and public land with little agriculture value should be retained under public ownership.
- Public land policy should ensure that marginal lands are not classified too highly and then sold for agriculture.
- A good neighbour policy with respect to adjacent land is required when managing Crown land.
- Treed areas and natural drainage systems should be maintained when public land is sold.
- Woodlots and wetlands should be maintained in farming areas.

Water Management

- Certain wetlands should be retained for water retention and regulation (i.e. act as a sponge to reduce flooding and erosion).
- Water management requires more funding.
- More equitable funding between drainage and irrigation is required.
- Water should not be moved until neighbours have been informed.

Wetland Ownership

- The policy should encourage defined boundaries for waterbodies.

Landowner Involvement and Rights

- Landowners should have the right to develop their land as they see fit.
- Criteria for wetland management should be developed in cooperation with local residents especially landowners.
- Farmers should have a say in wetland management.

Wildlife Damage

- Farmers should receive full compensation for waterfowl damage to crops.

Management Agencies and Responsibilities

- A single management agency should be responsible for wetland management and information.

Wetland Degradation and Pollution

- Effluent discharge into waterbodies should be strictly regulated.

Specific Management Suggestions

- Key wetlands should be identified in association with local governments.
- The government should allowed periodic controlled burning of public wetlands to improve vegetative cover.
- The Fish and Wildlife Division should be less forceful and more cooperative when controlling wetlands and adjoining areas.
- Alberta Transportation and Utilities should improve their water management activities.
- Large buffers around wetlands should be provided.
- The difference between natural wetlands and those created by beavers should be recognized.
- Excessive flooding as a result of beavers should be addressed.
- Farmland development should not be sacrificed to save small wetlands.

- Ducks should be encouraged to move to areas with water.
- Farmers should be allowed to charge for hunting.

Coordination and Cooperation

- Greater coordination between departments and levels of government is required.
- Coordination in resolving drainage and flooding problems is required to overcome the single farm solution.

Comments from Briefs and Letters

Individuals and groups provided 35 briefs and letters on wetland management. Over 500 comments were extracted from the briefs and letters and are summarized in the following categories.

Statement of Principle

- Recreation and wildlife benefits from wetlands should be recognized in the statement of principle.
- Agriculture should be removed from the statement of principle because it is addressed by environmental, economic and social benefits.
- Wetland benefits listed in the statement of principle conflict and should be ranked.
- The word "wetlands" should be substituted for "wetland resources" in the statement of principle.
- The word "conservation" should be interpreted to mean both preservation and wise use.
- The word "conservation" should be removed from the statement of principle.
- Management should be recognized as one way to effect conservation in the statement of principle.
- The term "ensure" in the statement of principle is presumptuous without stronger legislation or intrusion on landowner rights.

Societal Responsibility

- A few individuals should not pay the price of wetland protection for society as a whole.
- National funding for wetland protection should be developed through cooperative agreements.
- Funds should be transferred from society to landowners to assist in wetland protection.
- The benefits of wetland retention should be distributed to society and not only landowners.
- Farmers should not be caretakers of wetlands at a cost to their livelihood.
- People who benefit should be responsible for the costs and inconveniences of wetland protection.

Value of Wetlands

- Recognition of the value of wetlands for wildlife should be increased.
- Wildlife values should be recognized separately from environmental values.
- Wetlands are valuable for endangered species, hydrology, research, education, furbearing animals, wild rice and waterfowl.
- Wetlands are valuable ecosystems.
- The policy should recognize the value of retaining permanent and temporary wetlands.
- The importance of riparian shorelands should be recognized.
- The value of naturally fluctuating wetlands as bird habitat should be recognized.

Focus of Wetland Policy

- A clear, cohesive integrated wetland policy is required in Alberta.
- A wetland policy should address conflicting legislation and programs, competing interests and wetland losses.
- The government must be committed to the wetland policy and should act quickly on wetland management initiatives.
- Program delivery and legislative review strategies should be strengthened and methods for implementation identified.
- The wetland policy should be user friendly and understandable to the public.
- The policy is weak reflecting an overall concern with agricultural values and little appreciation of wetland values.
- The policy provides no basis for enhancement of a seriously degraded resource.
- Wetlands should be placed first under the policy.
- The policy should provide a legal basis for preventing further wetland loss.
- The policy should provide for management flexibility with respect to coal development.
- The policy should recognize existing regulatory processes that address coal mining and other land uses.
- The policy should refer to government drainage and channelization programs and policies, particularly the costs.
- The policy should be strong and meaningful and avoid motherhood statements.
- The wetland policy should define provincial philosophy and priorities.
- The policy should provide common guidelines and standards for regional and municipal policies.
- The list of objectives in the policy illustrates the fragmentation and conflict that exists and should

be removed.
- The first wetland management strategy should be reworded into an objective for regulating planning processes.
- The policy should refer to Section 3 of the Public Lands Act which determines ownership and responsibility for wetlands
- The policy would benefit from reference to existing federal and provincial policies.
- The policy lacks a stated goal with respect to wetland habitat.
- Detailed information on quality and quantity of provincial wetlands and on conservation initiatives should be included.
- The education and awareness strategies in the policy should be expanded.
- The policy should clarify rural lands that should be protected and how surrounding land should be managed.
- The policy lacks emphasis on the concept of sustainable development.
- The policy should present a more holistic, comprehensive approach to wetland habitat conservation.
- Wetlands are precious, declining, non-renewable resources that should be preserved and enhanced.
- Measures to protect wetland wildlife and habitat should be undertaken as soon as possible.
- An overall landscape approach should be reflected in the wetland policy.
- Wetland loss and degradation should be addressed in the policy.
- Restrictions on urban subdivisions and developments should be minimal.
- Wetlands should be managed in an environmentally sustainable way.
- Wetlands and associated riparian areas should be maintained and enhanced.
- Wetland management is not as critical as wetland protection.
- Shorelands, watersheds, basins and impacting uses should be managed to protect wetlands.
- Remaining wetlands must be protected and wetland loss must be mitigated.
- Multiple "use" of wetlands could lead to multiple "abuse" of wetlands.
- A diversity of temporary and permanent wetlands should be protected.
- Environmentally significant areas such as wetlands should be protected.
- Legislation, incentives and subsidies should permit and encourage wetland conservation, enhancement and restoration.
- The needs of the agricultural community and ecology, wildlife and recreation should be balanced in the policy.

General Management Approach

- Small groups of wetlands with connecting habitat should be managed as a unit.
- Wetland management strategies should be reviewed regularly and modified to fit changing circumstances.
- Wetlands should be managed as part of a drainage system not in isolation.
- Land use decisions that affect wetlands should consider all values on a site specific basis.
- Environmental, economic and social effects (costs/benefits) of wetlands decisions should be determined.
- All wetland conversion should be subject to review.
- The public should be involved in wetland management decisions.
- Wetland management must recognize the differences and relationships between private and public land.
- Financing of land acquisition and development of wetland facilities should be considered.
- Wetland management should not occur at the expense of agriculture.

Inventory

- A wetland inventory should be integrated with the municipal land assessment system in the White Area.
- A wetland inventory should consider water supply and quality, agriculture and municipal use and ecological values.
- The government should immediately undertake a detailed inventory of wetlands types, distribution and abundance.
- The provincial government and City of Edmonton should exchange baseline information about wetlands.
- Seasonal and long term changes in wetlands should be recognized in an inventory.
- A more ecologically based system of wetlands classification should be prepared and used in policy development.
- All wetlands in the province should be inventoried (e.g. depth, species, pH, pollutants, etc.)
- The 4-H program should be involved in inventory and enhancement of wetland habitat.
- Existing wetland information should be used in

the inventory.
- A wetland inventory should include a ranking scheme and reflect ecological characteristics.
- An inventory of wetlands should be conducted so that wetland values can be weighed against other land uses.
- A wetland inventory would complement information available through the drainage basin study.
- A wetland data base should be systematically compiled and accessible to all sectors of society.
- A provincial inventory of wetlands is needed for good planning and management.
- Conducting more wetland inventories should not be an important primary goal.
- Wetlands with a priority for protection should be identified.

Wetland Definitions

- The definition of permanent and nonpermanent wetlands should be clarified.
- Definitions of wetlands should differentiate between urban and rural wetlands.
- Beaver ponds should be addressed under the definition of wetlands and should be managed under the policy.
- The definition of wetlands should include permanent and seasonal streams and riparian areas.
- Excluding wetlands from the definition of open water bodies under the new Alberta Environmental Protection and Enhancement Act has serious implications for pesticide control.
- Wetland definitions should be included in the policy.
- Consistent terminology and definitions should be used in policies and legislation.
- The definition of permanent wetlands should consider the regional and site specific importance of the wetland.
- Explicit definitions of wetlands are required (e.g. permanent and temporary, public and private).
- Difficulties in defining "permanent" wetlands should be recognized when setting policy.

Management Objectives

- Wetlands with significant ecological and environmental values should be protected.
- The wetland policy should include specific objectives for the type and quantity of wetlands to be protected.
- Nonpermanent marsh habitat should be managed to provide nesting habitat for a variety of birds.
- Sustainable agriculture should be a goal and economics must be strongly considered.
- Agriculture should have priority when establishing wetland objectives in rural areas.
- Wetlands should not be managed to maintain agricultural or economic benefits.
- Multiple use of wetlands should be supported except when protection of endangered or sensitive species is involved.
- Seasonal and semi-permanent wetlands should be protected for waterfowl and other wildlife.
- The importance of natural wet and dry cycles of wetlands should be recognized.
- The importance and vulnerability of nonpermanent wetlands should be recognized in management strategies.
- Intermittent streams and riparian areas should be protected under the wetland policy.
- Key government and private groups with an interest in wetlands should be involved in setting management objectives.
- Wetlands along streams should be protected for wildlife habitat.
- A wetland ranking scheme should consider social components, hydrological value and special features.
- Measurable objectives should be established for different wetland types and areas of the province.
- Multiple use where a little bit is given to everyone may not be acceptable. Priorities should be set.
- Management strategies should be established for wetlands with protection as a high priority.
- The objective behind controlled drainage of nonpermanent wetlands should be stated.
- The objectives listed in the policy are confusing and conflicting.
- The objectives underlying management strategies should be explicit (e.g. what is the objective behind no drainage of permanent slough/marsh wetlands?)
- A wetland ranking scheme should account for higher biological productivity in southern wetlands than in northern wetlands.
- Priority wetlands should be protected from uses that are incompatible with their ecological functions.
- Coal mining and reclamation is compatible with long term wetland values.
- Natural vegetation and wetlands should be retained or restored within new subdivisions.
- Wetlands should be protected as habitat for endangered (eg. piping plover, Baird's sparrow)

and migrating birds.
- Different objectives for wetlands should be prepared for sub-regions or at least regions.
- Private and public property and public safety should be protected.
- Peat resource values should be maintained.
- Long term agricultural productivity should be maintained with minimal disturbance of wetlands.
- Heritage, ecological, recreational, tourism and wildlife values of wetlands should be protected.
- The quantity and quality of wetland resources should be maintained.
- A sustainable supply of high quality groundwater should be maintained.
- Surface water quality should be protected and improved.
- Potential conflicts between wildlife and recreational use of wetlands should be recognized.
- Existing agricultural use of land should be maintained.

No-Net-Loss

- A no-net-loss policy for wetlands should be applied especially for the prairies and aspen parklands and within urban areas.
- The cost of mitigation for lost wetlands under a no-net-loss policy should be paid by the responsible party.
- Any wetland loss should be 100 percent mitigated within the same planning unit (e.g. sub-basin, landscape or township).
- A no-net-loss policy would force an evaluation of the economic cost of replacing a wetland.
- Drainage of permanent wetlands would not be permitted under a no-net-loss policy because of the high cost of replacement.
- The significant cost of replacing drained or damaged wetlands should be recognized.
- No-net-loss of wetlands is not enough because we have already lost so many wetlands.
- No-net-loss of wetlands and associated riparian areas would allow continued agricultural benefits from public wetlands.

Regional and Local Differences

- Wetlands in different areas of the province should be managed differently.
- Variability in wetland types, ecology and distribution should be recognized in the policy.
- The policy should be developed on a regional basis not as a blanket policy for all of Alberta.
- Variability in management strategies should focus on enhancing benefits from wetlands.
- Each region of Alberta should have its own wetland policy.

Education

- The public, politicians, landowners, agricultural producers and governments should be educated about wetland values, benefits, uses and management.
- The agricultural community should be better informed about wetlands and incentives for preservation.
- The "Shoreline Facts" brochure should be distributed to all lakeshore landowners as soon as possible.
- Professional land management assistance should be provided to landowners.
- Education should be used to increase public awareness of the benefits of wetlands.
- Information for public education must be scientifically based.
- Albertans should be informed about the costs and benefits of maintaining wetlands.
- Wetland educational programs should be similar in scale to seat belt and anti-smoking campaigns and should be coordinated with existing programs.
- Agricultural service boards should be used to inform the public about wetlands.
- Existing information should be used for education rather than conducting research to gather new information.
- Albertans should be informed about government programs and policies and appropriate individual action to protect wetlands.

Drainage

- Wetland drainage in rural areas should be prohibited.
- Prohibiting drainage of permanent slough/marsh wetlands within urban areas is too restrictive.
- In some cases, drainage provides the most benefits and allows for changing social values.
- Drainage of permanent wetlands should be permitted if the benefits outweigh losses.
- Adjacent landowners should be consulted about any drainage.
- Drainage of permanent slough/marsh wetlands on private land should be permitted unless it is contrary to the public interest.
- Wetland drainage is undesirable and

unacceptable.

- All local, provincial and federal subsidies and incentives that encourage wetland drainage and consolidation should be eliminated.
- Alberta Agriculture and Environment subsidy programs for wetland drainage should be reallocated to wetland protection.
- Drainage of nonpermanent wetlands should not be considered under a no-net-loss policy.
- Prohibiting drainage of permanent wetlands would sterilize significant coal resources underlying these areas and would have negative effects on the coal industry.
- The proposed ban on drainage of permanent wetlands should be reconciled with Alberta's Coal Development Policy.
- Drainage of permanent wetlands should be decided at a site specific level rather than prohibited entirely.
- Drainage should be carefully monitored and should be discouraged where appropriate.
- Encouraging maintenance of permanent wetlands is a better approach than prohibiting drainage of permanent wetlands.
- Potential for conflict in drainage of nonpermanent wetlands on a regional basin should be recognized.
- Landowners who drain without authorization should pay downstream costs of erosion control and water management.
- Landowners who drain without authorization should not be eligible for government subsidies and should be financially penalized in cases of extreme neglect.
- Drainage proponents should pay the full cost of projects.
- A strong relationship between wetland management and drainage control should be established.
- Funds being spent on drainage subsidies should be redirected to wetland retention, restoration and enhancement.

Wetland Consolidation

- Wetland consolidation should generally be avoided.
- Consolidation of sloughs should be the preferred method of controlled drainage and should be encouraged.
- Wetland consolidation involves drainage of important semi-permanent wetlands and should not be permitted.
- The negative effects of pothole consolidation on waterfowl should be recognized.
- Wetland consolidation should be an option within urban subdivisions.
- A smaller management unit than "regional" is required to protect small wetlands if consolidation occurs.
- Mine reclamation provides an opportunity for consolidation of small isolated wetlands into larger permanent wetlands.
- Slough consolidation on private land should be allowed to maximize agricultural production and groundwater recharge.
- Regional wetland consolidation should not be encouraged.

Wetland Creation and Restoration

- The cost of replacing wetlands in urban areas should be part of the cost of development.
- Mitigation for loss of breeding waterfowl habitat should be improved based on scientific methods.
- Wetlands that are lost because of coal mining should be reclaimed or replaced.
- The role of reclamation in maintaining wetland values should be recognized.
- Opportunities to create wetlands as part of coal mining operations should be recognized.
- Creation of new wetlands should be encouraged but should not justify elimination of natural wetlands.
- Significant wetlands that have been damaged should be reclaimed or restored.

Compensation and Incentives

- The government or private sector should provide adequate ongoing compensation or incentives to landowners for wetland retention.
- Landowners should be compensated for any economic loss if required to retain or drain wetlands for the public good.
- Preferential taxes, land purchases and easements, direct assistance and incentives for enhancement should be considered to encourage wetland retention.
- The Assessment Act and other appropriate legislation should be amended so that conservation easement lands are reclassified and assessed at lower levels.
- A province wide fiscal initiative for wetland retention may be required to be equitable.
- Landowner income from habitat easement agreements should not be taxable.
- Disincentives to wetland retention should be

removed (e.g. grain quotas, land assessment and taxation).
- Landowners who retain rural wetlands should not be penalized.
- Financial incentives to landowners to protect wetlands should not be provided within urban areas.
- Landowners should be fairly compensated if water management affects private land.
- Farm subsidies should be conditional on wetland retention and adoption of sound soil and water conservation practices.
- Land donations should be accepted in lieu of taxes.
- Taxes should be based on existing not potential use and should not be assessed against wetlands.
- Municipalities should be compensated for any losses in tax base as a result of wetland conservation programs such as conservation easements.
- Sound soil and water conservation programs should be implemented.
- Voluntary compliance through incentives is preferable to fines and penalties (i.e. a carrot is better than a stick).
- Compensation should exceed the value of annual agricultural production.
- Conservation subsidies would probably not be needed if incentives for drainage were removed.
- Incentives should be provided to protect wetlands for agriculture not recreation and wildlife.
- Funding or administration of incentive or compensation programs should not be a municipal responsibility.
- Difficulty in fairly and equitably applying incentive programs should be recognized (i.e. a landowner may receive an incentive while the cost and inconvenience are borne by neighbours).
- The low tax assessments rates on wetlands should be clearly visible to property owners.
- The provincial rather than municipal government should be responsible for compensation programs.

Public Land and Wetlands

- Significant wetlands that are considered for public acquisition should be clearly defined.
- Conservation easements should be placed on wetlands before public land is sold.
- The provincial government should take a strong leadership role in wetland management on public land.
- Landowners should receive fair value for any wetlands that are purchased by the government.
- A heritage land bank should be established and advertised.
- Non-productive or bankrupt farms should be designated as parks.
- Public ownership of public lands that contain wetlands should be retained.
- Leasing of private land with significant wetlands should be considered.
- Conservation easements should be considered as a cheaper alternative to purchase or lease of wetlands on private land.
- When land is subdivided, the wetlands should be given to the provincial government or county for preservation.
- The government should be prepared to purchase wetlands from farmers for preservation.
- Purchase of wetlands by the government should be optional not obligatory to landowners.
- A method of subdividing wetlands from land parcels is required if the government intends to purchase wetlands.
- The effect of activities on Crown land on agricultural land should be recognized.
- Land swapping for wetlands between the government and landowners should be considered.
- Transfer of title to wetlands to the province should be considered.
- Government and non-government wetland acquisition and protection programs should be expanded.
- The stock of public wetlands should be expanded as insurance against drought.

Public Access

- Problems with irresponsible hunter activity should be recognized.
- The public should have access to wetlands on private land if the wetlands are supported by public funds.
- The public should understand that they do not have the right to cross private property to use public wetlands.

Water Management

- Farmers should be advised and assisted in retaining water on their land.
- Wetlands should be used for flood control and water management.
- Assistance should be provided for dugout construction to catch run-off and enhance wet areas.

- Water retention areas should be enhanced with islands, deep holes, rock piles and interconnected wild corridors.
- Off-site costs of drainage and water management impacts should be paid by the perpetrator rather than the government.
- Intermittent and slow moving streams should be protected from excessive runoff due to upstream drainage.
- Use of wetlands for water management should include other uses such as wildlife.
- Normal storm water management practices should be allowed within urban communities.
- Wetlands within subdivisions should be maintained in a natural state provided stormwater retention ability is maintained.
- Wetland retention and stormwater management should be incorporated into programs under the Alberta Water Management and Erosion Control program.
- Use of groundwater by the oil industry should be carefully controlled especially in dry areas.
- The ecological importance of fluctuating water levels in Buffalo Lake should be recognized.
- Construction of dugouts in a dry wetland basin may prevent restoration of the wetland during wet periods.
- The increased potential for flooding of drained wetlands should be recognized.
- Use of wetlands as water management tools may damage the natural character of the wetlands.
- Kimiwan Lake should be preserved and stabilized at the optimal level.

Research

- The effects of slough consolidation should be studied.
- The Alberta Water Resources Commission should study urban wetlands including inventory, definitions, research, regulations, required resources and fiscal needs.
- The government should fund or promote coordinated research on wetland values, functions and processes.
- Wetland research should not be used as a stalling tactic while drainage continues.
- Research should be conducted on a variety of wetland types and wetland ecology.
- Relationships between surface and ground water and wetlands should be studied (e.g. Alberta Research Council).
- Research on wetlands should not be a management priority.

Wetland Ownership

- The policy should address and resolve the ownership of wetlands and management mandates.
- All Crown owned wetlands should be removed from the land description on private land titles.
- Legal Crown ownership of wetlands and their riparian zones must be clearly identified and secured.
- Existing licensed works and agreements should be noted on private title and attached to the title.
- Landowners should understand that the bed and shore of permanent waterbodies belong to the province.

Landowner Involvement and Rights

- The policy should not unduly compromise the rights of landowners.
- Food producers should be given full consideration in policy development.
- The economic needs of individual landowners should be recognized and have priority unless clearly contrary to the public interest.
- Farmers should have the right to drain sloughs on their property.
- Landowners should have three options regarding wetlands on their property; keep them, drain them or sell them to the government.
- The severe negative effects of prohibiting drainage on private land should be recognized.
- A voluntary rather than regulatory approach to landowner involvement should be adopted.
- The support of farmers and landowners is required for a wetland conservation policy to succeed.
- Landowners should not be expected to pay a disproportionate share of the costs of wetland retention for society.
- Farmers should be allowed to manage titled land and water as they see fit.

Wildlife Damage

- Crop damage by wildlife should be compensated 100 percent.
- The potential for increased waterfowl damage to crops near protected wetlands should be recognized.

Irrigation

- The contribution of irrigation to wetland creation should be recognized.
- The high cost and difficulty of irrigation farming around wetlands should be recognized.

Management Agencies and Responsibilities

- A provincial lead agency should be designated and legislated to implement all aspects of the wetland policy.
- An independent multi-disciplinary board or committee should be established to review all drainage and water management proposals and ensure compliance with mitigative measures.
- A wetland review board should have veto power and expertise to resolve conflicts.
- The Alberta Water Resources Commission should participate in planning and policy initiatives that affect wetlands including the provincial round table on environment and economy, agriculture policy review, and reviews of the Wheat Board Act, Western Grain Transportation Act and the Prairie Farm Rehabilitation Administration's Permanent Cover Program.
- A single government agency with a strong legal mandate is required to protect and conserve wetlands.
- A hierarchy of wetland management should be considered (i.e. provincial government to regional planning commissions to municipalities).
- All three levels of government should be involved in wetland management.
- Municipal governments should be given the legislative tools and authority to properly manage wetlands.
- The policy should be administered by one department or with the cooperation of various departments.
- A new department or division should not be created to handle wetland management.
- Municipal involvement in integrated resource and water basin planning should be increased.
- Municipalities should have a say in the management of wetlands within their boundaries.
- Inter-municipal communication should be promoted where wetlands cross municipal boundaries.

Scope of the Policy

- The wetland policy should be extended to the rest of the province (i.e. the Green Area).
- The policy should be expanded to address upland and riparian habitat.

Wetland Degradation and Pollution

- Wetlands should be protected from pesticide and nutrient runoff, grazing, dog and cat predation, habitat modification and recreation.
- Livestock grazing should be managed to prevent wetland degradation and pollution.
- The negative impacts of water based and winter recreation on wetlands and wildlife should be recognized in the policy.
- Mining operations should avoid disturbance of wetlands where possible particularly permanent wetlands.
- Herbicides and pesticides should not be used in urban greenbelts because of the effects on wildlife.
- Forested land adjacent to wetlands should not be grazed even if fenced off from the wetland.
- Tourism development should not compromise wetland values.
- Government owned wetlands should be protected from environmental damage (e.g. pesticides and fertilizers).

Roads

- Road construction and maintenance should not alter natural watercourses.
- Wide culverts should be used to allow passage of swimming animals under roads.
- Guard rails should be placed along roads to prevent vehicles or spills from entering wetlands.
- Transportation, pipeline and utility corridors should be routed to avoid wetlands.
- Existing roads should be examined and buffer vegetation should be planted where possible.

Urban Development

- The policy should be applied to urban areas.
- The policy should acknowledge and investigate the special situation in urban areas with respect to wetland management.
- The draft policy should not be implemented within urban areas unless it is changed to reflect urban needs.
- Growth in urban communities should not be restricted by the policy.
- Urban stormwater management ponds should not be expected to replace the values of natural wetlands.

- Wetlands within urban areas should be set aside and used to enhance a community.
- Urban greenbelts should be managed and enhanced as wildlife habitat.
- Bylaws should be used to protect urban wetlands from development and detrimental activities.
- Compatible multiple use of urban wetlands should be promoted and maximized.
- An interdisciplinary approach to planning and development of wetlands within urban areas should be used.
- Potential problems with shallow water developments in urban settings should be recognized.
- The impact of urban runoff on wetland water quality should be considered.

Wetland Margins

- Native vegetation buffers should be maintained or planted around the margins of all types of wetlands.
- Wetland buffers should extend from emergent vegetation to uplands and allow for short and long term water level fluctuations.
- Adequate nesting habitat is required for waterfowl to avoid excessive predation.
- Upland habitat for a variety of wildlife should be maintained or restored around wetlands.
- Stream banks should be protected through retention of suitable vegetative cover.
- Protection of upland nesting habitat should not restrict the use, sale or development of land within urban communities.

Peat

- The value of bog-fen wetlands beyond peat extraction should be recognized.
- Peatland management should be part of a provincial wetland policy.

Specific Management Suggestions

- Methods of improving agricultural productivity and conserving wetlands should be examined.
- A method for prioritizing use of wetlands should be developed (i.e. similar to the environmental impact assessment process).
- The cost of losing a hectare of wetlands should be determined and quantified.
- An effective environmental impact assessment review process for government subsidized projects that affect wetlands should be implemented.
- The environmental impact assessment process under the Alberta Environmental Protection and Enhancement Act should be used to assess wetlands decisions.
- Lead shot in shotgun shells should be outlawed.
- Total economic costs and benefits should be evaluated before wetland conversion.
- Strathcona County's ConserACTION program should be a model for local wetland management.
- Private conservation organizations should be empowered to negotiate conservation easements with landowners.
- Conservation easements or restrictive covenants should be used to preserve wetlands and wildlife and plant habitat.
- Water based recreation on Cooking and Hastings Lakes should be controlled to limit environmental impacts.
- Existing comprehensive review and approval processes should provide adequate protection for wetlands from coal mining.
- The potential for creation of saline ares near wetlands should be recognized.
- The control or elimination of introduced species such as purple loosestrife and Eurasian milfoil should be addressed.
- Identification of environmentally sensitive areas and integration of environmental impact assessments into the city planning process should provide for wetland protection within the City of Edmonton.
- Public wildlife viewing areas should be developed on Gaol and Tyrrell Lakes to attract tourists to the Lethbridge area.
- Kimiwan Lake and the surrounding area should be protected and promoted for bird watching and tourism.
- The role of climatic drying and drought in wetland loss should be recognized.
- Reductions in the agricultural land base as a result of wetland preservation should be recognized.

Conflicting Programs

- The policy should define conflict resolution mechanisms, processes and responsibilities.
- Government programs should be consistent with the policy (e.g.Transportation and Utilities, Environment, Public Works, Supply and Services.
- Government legislation, policies and programs at all levels should not work at cross purposes.

- Government policies that affect wetlands should be consistent and avoid conflict.

Cooperation and Coordination

- Provincial, municipal and federal government and private wetland preservation initiatives should be coordinated.
- Commitment and cooperation are required at all levels of government and private organizations.
- Government departments should be aware of other programs and support and encourage complementary action.
- Key government agencies must be involved in policy development and must cooperate in implementing the policy.
- Communication, cooperation and coordination among private and government agencies at all levels is required.
- Regional planning commission input into provincial programs affecting public lands should be improved.
- Coordinated implementation is required.
- Existing prejudices, biases and mistrust within and between private and government organizations should be reduced.
- The wetland policy should be linked to other land use policies to provide integration and continuity to environmental management.
- Inconsistent policies and programs should be recognized as major contributors to wetland loss.
- Government department resistance to changes in existing programs and past practices should be recognized.
- Program delivery must include all levels and departments of government that are involved in wetland management.
- The Alberta Water Resources Commission and Alberta Environment should communicate about wetland policy and water basin studies.

Legislation

- Legislation should be reviewed to ensure that it meets the needs of landowners and users.
- Legislative barriers to long term protection and management of wetlands should be removed.
- The Public Lands Act should be strengthened to protect wetlands and riparian areas.
- New legislation should be reviewed at public forums.
- The Land Surface Conservation and Reclamation Act should be used to assess post mining land uses and implement wetland management.
- Legislation and enforcement should be replaced with a cooperative approach to wetland management.
- The policy should set direction through guidelines but should not be legislated.
- Wetlands should be protected through legislation with good enforcement and stiff fines or penalties.
- The provincial government should amend the appropriate legislation to facilitate conservation easements.
- Provincial and municipal legislation affecting wetlands should be reviewed and made consistent with the policy.
- The Land Titles Act and subdivision regulations should be amended to exempt permanent wetlands from titles when new titles are issued or registered.
- Subdivision and development control provisions of the Planning Act should be consistent with the policy.
- Legislation must be consistent, universal and enforceable.

Enforcement

- Existing legislation protecting emergent and shoreline vegetation of permanent wetlands should be enforced.
- Drainage legislation should be strengthened and consistently enforced.
- Unauthorized drainage and water management should be severely penalized.
- Enforcement of existing and new legislation should be improved.
- Wetland regulations should be consistently enforced.

Policy Implementation

- A new policy should be implemented in a logical orderly manner to allow time for adjustments.
- Projects that are under way should be completed.
- Regional and municipal statutory plans, bylaws, polices, programs and development control procedures should incorporate the principles of the provincial wetland policy.
- The initiatives in the wetland policy should be carried forward into government policy, legislation and programs of action.
- A definite timeline for implementing the policy and achieving objectives should be stated.

Comments From Response Forms

An open-ended response form was included with the draft wetland management policy. The policy statements were presented and space was provided for comments. Many individuals provided a wide range of comments on the proposed policy statements. The following summary of the 175 completed response forms is organized by the policy categories in the draft policy. The proposed policy statement and a brief overview of the responses is provided at the beginning of each section.

General Statement of Principle

The Government of Alberta will ensure the conservation and management of wetland resources in the settled area of Alberta to sustain the agricultural, environmental, economic and social benefits that wetlands provide.

The responses to the statement of principle were generally positive. Many comments recommended a focus for the policy or specific implementation strategies.

- The attempt to develop coordinated provincial policies is welcome.
- Such a policy should be put in place as soon as possible and then followed. It will need enforcement and implementation action.
- Policy is excellent and timely.
- A great initiative! The implementation must also be put in place; start with things that are achievable.
- Congratulations on this public participation program.
- It is critical that the rate of loss be slowed, if not stopped. Ensure the future of wetlands.
- Approve of the direction in the draft policy.
- Generally find it difficult to determine exactly what the policy is.
- Pleased that government recognizes the significance of wetlands and the importance of having a publicly supported policy in place to protect and manage this valuable resource.
- Perhaps this recognition will provide our children with the options of decision making that we have now.
- Statement of principle is too vague and lacks a proactive component.
- Don't let this initiative on wetland preservation fail because of budget cuts.
- Not sufficiently strong.
- Reference to the concept of sustainable development is required.
- Costs should no longer be externalized.
- The general public must be willing to pay compensation to landowners.
- Establishment of an effective policy which recognizes total societal values of this resource is long overdue.
- Consider how to get a balance between requiring/expecting responsibility of landowners and the need to ensure that the public supports individual actions to maintain public benefits.
- Need a balance between agriculture and conservation; they depend on one another.
- Private landowners should be considered as stewards not owners of land.
- In the final analysis all land use boils down to dollars and cents.
- Wetlands must be recognized as a benefit to everyone and that destroying them is not negotiable.
- Believe the value of wetlands is completely underestimated.
- The statements about benefits and values are unqualified and unquantified. People want facts, not statements passed off as facts.
- Need to preserve wetlands as a renewable resource for the future of agriculture, industry and people or the economy will suffer.
- The policy should recognize the ecological and natural heritage values of wetlands. The value of the wetlands as wetlands, not wastelands, will need continual emphasis.
- Wetlands are of little value to fish production.
- As a farmer, I believe we must save all remaining wetlands possible!
- The policy should explicitly state a goal of no-net-loss of wetlands in the settled area of Alberta. This should apply to all wetland types and mitigation should occur in the same planning unit.
- Environmental and ecological concerns must have priority in road construction design decisions.

- Policy is flawed because it assumes wetlands should be maintained only so long as they serve humanity.
- Management should be aimed at recouping lost resources.
- Policy does not provide direction because all demands are treated as equal and no priorities are set.
- There should be an immediate halt to drainage. Priority should be given to wildlife.
- Conservation and wildlife are the major concerns of the public. Wetlands and upland cover protection and conservation should have priority over agriculture, roads, housing developments, industry, recreation and commercial ventures.
- Wetlands are a diminished resource in Alberta. Management which maintains the status quo is not acceptable.
- Protection of wetlands is essential for waterfowl, other animals, plants, soil conservation and groundwater recharge.
- Policy should also address problems caused by industry, especially feedlots, along stream banks.
- Incentives should be provided to farmers to encourage or require consolidation if drainage of nonpermanent wetlands is allowed.
- Need policies for industries to control water pollution.
- Need public pressure and financial incentives to keep farmers from draining.
- Need to consider global warming and the consequences for wetlands and other land uses.
- Need a moratorium on further wetland drainage in areas where they are already greatly diminished.
- Focus of the policy should be on a holistic, ecosystem approach.
- Municipalities should be involved in development and implementation of policy. Use municipal planning programs.
- The key is not in policy making rather in public and government awareness.
- A wetland policy must take the views of all Albertans into consideration.
- If policies are set to benefit the urban population without addressing the needs and concerns of the rural residents then policy cannot be effective.
- Utilize government control and jurisdiction as little as possible.
- Need a solid legislative backing so civil service field people can maintain policy with a minimum of technical and bureaucratic difficulty.
- It is vital we take much stronger action to preserve this most important of all resources.
- Wetland policy should not be first priority with everything else following behind. What about the wetlands in the unsettled areas?
- There should be no consumptive exploitation of wetlands.
- Need to recognize the wetlands associated with irrigation systems.
- Government should act as catalyst not a dictator.
- The policy statement should emphasize wetland retention not agriculture interests since agriculture is a main threat to wetlands.
- Need more "will" rather than vague "may" statements.
- An integrated approach to determining individual site values is the best approach given the complexity of the subject.
- Action plans should recognize diversity in wetland locations and situations.
- All agencies (private and government) have to learn to work together.
- Wetlands should be managed for biological diversity then the other objectives tend to come automatically.
- Policy does not give adequate direction regarding drainage conflicts except for permanent wetlands.
- Use a focus species such as the leopard frog to catch public attention to wetland preservation.
- Wetlands should be allowed to run natural course of aging. They exist, therefore they should remain to do so.
- Policy should consider impact of land management on wetlands.
- Private interests can conserve wetlands quicker and cheaper than government but must be empowered to do so.
- Most wetlands should be conserved in their natural state. There should be very little development or management.
- Pleased that the policy recognizes that primary benefits of wetland retention are to society while costs are to the individual landowner.
- Public input to policy should include all Albertans not just those directly affected.
- Policy should give priority to protecting existing and restoring degraded wetlands for the wide variety of native wildlife dependent on them, and secondarily to maintaining water tables.
- Peat resource values cannot be sustained with consumptive use.
- The government should spend money on water resources more equitably across the province.
- All landowners should be required to reserve a portion of each quarter section of land for bush, wetlands or natural pastures.

- There should be a program to preserve wetlands on public land.
- Any projects in the province that affect wetlands should be required to undergo an environmental impact assessment; public hearings should be required when public funding is involved.
- Include better definitions of terms such as benefits, nonpermanent, slough and marshland.
- Consider the sub-basin water management pilot project in the Peace River area as a possible implementation technique.
- Policy should address roles for local governments, regional planning commissions, education institutions, non-government organizations, community groups and private owners.
- Review and eliminate conflicting government programs.
- The policy should set conservation and education as the main goals of wetland management.
- Education of school children will assist in education of adults.
- Conversion to forage and pasture crops and protection of wetlands around cities and towns are effective, inexpensive approaches to reverse the trend of wetland loss.
- Cancel subsidies to landowners who destroy wetlands. Alberta Agriculture could administer this.
- Have an environmental ombudsman to oversee coordination of the program development and deliveries.
- Try to have Canadian Wheat Board quota system changed.
- Create a wetland classification scheme that indicates importance for conservation and permitted activities.
- Farmers would be more supportive of retaining wetlands if hunting was better controlled and farmer permission absolutely required.
- Wetland management should be solely under Alberta Environment and the Fish and Wildlife Division should be part of this department.
- Protect a full range of representative and special wetlands as part of endangered species initiative initiated by the World Wildlife Fund.
- Develop a Wetlands Conservation Act similar to, or with the same general intent as, the Soil Conservation Act.
- Policy needs to consider the cumulative impact of individual wetland loss. Projects cannot be considered in isolation.
- Need an education and enforcement program to ensure unlicensed drainage does not continue.
- Ongoing research into ecology, chemistry and hydrology of wetlands should be fully supported.
- Drainage policies should be administered by Alberta Agriculture.
- Need a process to deal with drainage until a new policy and/or legislation is in place and functioning.
- Assure retroactive benefits for those protecting wetlands now and penalties for those who don't.
- Use federal Migratory Bird Act to conserve wetlands.
- Discontinue any incentives or subsidies to drain wetlands.
- Industry and agriculture must not be allowed to expand any further onto land containing valuable wetlands.
- Legislators need to know the positive political payoff for sound sensible wetland management, education and legislation.
- Seek cooperation and funding with U.S. agencies who benefit from wetland conservation.
- Schools need to teach a more balanced approach to wetlands.
- Make landowners aware that the Crown owns permanent wetlands.
- Maintain wetland areas that are now or have potential to be significant tourism attractions.
- Local governments must be prohibited from building roads through wetlands or bird sanctuaries.
- Begin work on a wetland policy for the Green Area. This would prevent problems before they arise.

Planning Strategies

Three planning strategies were suggested in the draft policy. Comments were received on each and, in addition, a number of other suggestions were received.

1) Conduct inventories of the settled area of Alberta to determine the distribution, type, condition and status of wetlands in support of wetland management planning.

The majority of comments were in favour of conducting inventories. Those that did not felt that enough information was already available. Comments were also received on the timing, survey contents and methods.

- Inventories are absolutely necessary to develop long term planning.
- First priority. Until we can cite numbers we don't stand very much chance of being heard.
- Don't we already have one? Would it be available in Forestry, Lands and Wildlife, or through Canada Land Inventory data, local government assessment offices, universities or regional planning commissions?
- Essential step before assigning best use or multiple use.
- Perhaps enough inventory work has been completed to know the extent of the problem.
- This is already known and little but an added drain to the tax paying public to create some more civil service jobs.
- Review of existing studies will likely yield sufficient data to allow development of this policy.
- Good, publish or make available to public if requested.
- Not necessary in an area that is subject to periodic droughts which dictate that the management of water is very important for the livelihood of individuals.
- Paramount. Cannot manage a resource effectively unless we know what and how much we have. Inventories should also be done for lakes and rivers.
- Nice to have but not essential. There are concerns that an inventory would be used to rationalize further drainage in certain areas.
- Support. Make the results regularly available to local governments and groups so wetlands can be monitored.
- Yes. Put a moratorium on all drainage until the inventory is complete, management guidelines have been developed and long term strategies for implementation of conservation are in place.
- Yes but inventories simply document changes (i.e. losses); the trick is to save the wetlands.
- Not an important primary goal.
- In order to do inventory it will be necessary to have a classification system for wetlands which includes wetland values. Need a standard system of evaluation which includes size, hydrological, biogeochemical, recreational, scientific and education aspects and provides a ranking of relative significance.
- Need to know rate at which sedimentation is occurring; this could be estimated from aerial photographs.
- Include former wetland areas which could be returned to wetland habitat; assess economic impact of doing this.
- This should follow the collective Alberta vegetation inventory format and should support the strategy for an ecological classification system currently being worked on by Alberta Forestry, Lands and Wildlife.
- Include landowner information.
- Need to define a process by which the hydrologic value of wetlands can be identified.
- Need to include floodplains of permanent and temporary streams, creeks and rivers.
- Identify sites which can be turned into wetland habitat.
- Include plants, animals (game and non-game species), agriculture and industry as well as rare and endangered species.
- Provide sufficient financial resources, especially before deciding on major drainage projects.
- Inventory distribution, type, condition, status and amount of upland cover around each wetland and the potential for development of more habitat and cover.
- Sounds as though inventory will be done with a bias to wetlands; they may not be practical or desirable in all areas.
- Inventories need sufficient depth that ecosystem dynamics are revealed.
- Identify those that could be developed for tourism and recreation and those that should be left undeveloped for ecological and other reasons.
- Include Green Area in inventory.
- Use satellite imagery to do inventory and computer geographical information system to store results. Update it regularly.
- Could include a questionnaire with municipal tax notices asking landowners to identify locations and acreages of wetlands, peat bog or water, and temporary or permanent.
- A definitive, regional study is required; data should be collected by an impartial party, not by the landowner.
- Coordinate with Ducks Unlimited.
- Integrate with other types and programs of mapping or surveys for other land use or resource planning.
- Provide landowners with results from their own properties.
- Hire permanent staff to monitor wetlands on an ongoing basis; do not leave it to seasonal staff.
- Should be done by local governments as incentives will be applied locally.
- Use existing aerial photography supplemented by ground truthing.

- Expensive, so do over time and on a regional basis with those regions most at risk done first.
- Use data from wet and dry years.
- Do it quickly.
- Establish and maintain data base on wetlands to facilitate monitoring of effectiveness of policy.
- Can it be delayed until the budget is balanced?
- Conduct inventory concurrently with implementing conservation strategies; don't wait until inventory complete before doing anything else.
- Good idea to inventory but there is no rush or need to spend a lot of money.
- Need to maintain not just conduct. A program similar to the joint U.S./Canada and provincial annual spring waterfowl surveys would provide current, accurate information on wetland changes in extent, health and status.
- A one shot operation with minimal maintenance is all that is required.
- Do for one full annual cycle as ecological conditions and wildlife use vary by season.

2) Establish objectives for wetland management in the settled area. Existing river basin, integrated resource and municipal planning programs may assist in establishing wetland management objectives at appropriate scales.

There was complete agreement with the intent of this strategy. Comments focused on who should be involved and what criteria should be included in setting objectives. There was strong support for including municipal governments in setting objectives. Many responses suggested specific objectives.

- This is probably the most crucial activity to ensure that the general statement of principle is followed through.
- Objectives are absolutely necessary to develop long term planning.
- Wording is weak; should say "wetland conservation objectives".
- Objectives should be part of this document.
- Develop in consultation with local governments and regional planning commissions. They can identify significant wetland areas and enact protection through their plans and bylaws.
- Provincial government should have the final word in resolving conflicts.
- Once guidelines are established all levels of government must adhere to them and not be able to change without public involvement and special consideration.
- There needs to be specific guidelines for cooperation between government departments to avoid apparent conflicts such as between Alberta Environment and Forestry, Lands and Wildlife.
- An integrated strategy is important for this process to work. Involve private landowners, farmers and local governments to make sure all parties buy into the process. Group planning should be encouraged.
- Concerned organizations and individuals should be consulted.
- Need specific direction in policy as to who should establish these objectives and what should be the goals.
- Recommended objectives should be reviewed at public hearings.
- Establishing objectives will require working with those involved and affected to find a rational balance between economic and environmental interests.
- Establish the objectives first and let the existing programs meet the objectives.
- The public must be involved in establishing objectives.
- All departments, including Transportation and Utilities, Recreation and Parks and Tourism must be included.
- River basin, resource and municipal planning programs can conflict with wetland management objectives and may require changing. The ability of the provincial government to change these programs is a must.
- Concerned with using integrated resource plans as they are narrowly focused to plan future land use with little regard to other disciplines.
- Process should begin at the municipal level as part of the larger conservation strategy for each municipality. Municipal Affairs, Agriculture and the Water Resources Commission should work together with municipalities on all conservation issues at once.
- Specific direction is required at the municipal level because local governments may not have the expertise or assistance to interpret broad objectives.
- There is presently more concern with the high tax base than with preserving or retaining habitat.
- Wetlands should not be expanded in southeastern Alberta at the expense of agriculture.
- Create more municipal ponds to provide fish and

wildlife habitat.

- Objectives should be specific; it is past the time for generalities.
- Plans should include reclamation for areas already damaged.
- Objectives should be based on clearly understandable principles of ecological and hydrological function.
- There needs to be more teeth put into the planning strategies.
- The major objective must be to maintain ecosystem viability.
- Nonpermanent wetlands should not be made permanent. There is not enough water in the long term to make this concept successful.
- The first priority should always be the conservation of wetlands. Some wetlands must be fully protected. The inventory should be used to develop a priority list of wetlands.
- Stop the destruction of wetlands by provincial and local governments. Change agriculture policies which encourage farmers to drain.
- Ensure objectives consider potential for development of tourism uses which require the presence of permanent wetlands in the vicinity.
- Objectives should be set to conform to boundaries of local governments.
- Objectives should include: increases in acreage, no-net-loss regionally, maintaining in as natural a state as possible, encouraging species diversity, whole ecosystem approach, maintaining water quality and quantifying threats and opportunities.
- Recognize the importance of protecting the common good versus individual rights by ensuring that public facilities (roads, utility rights of way) are not made prohibitively expensive by avoiding all wetland areas.
- Maintain balance.
- Objectives must be set for management in the Green Area as well.
- Favour this holistic approach which considers wetland management with the management of other resources. Wetlands are part of complex hydrologic system and should not be considered in isolation.
- Objectives should include restoring all wetlands possible, including creeks and streams, and replanting trees around and along them.
- Define appropriate scales. How will the appropriateness of scale be judged; what criteria will be used?
- Clearly state the priority of wetland maintenance, emphasizing that there should be no functional loss of individual wetlands.
- Wetlands should have priority over other land uses.
- Objectives should be reviewed and adjusted as necessary on a regular basis.
- No feedlots should be permitted within 200 yards of a wetland or watercourse.
- Objectives should be to retain the quality of our land, water and air as well as the productivity of our land base to produce the greatest mix of vegetation, wildlife and domestic foodstuffs.
- Need standards of terminology.
- Wetland management that stabilizes river flows should be given priority.
- Protection should be included as part of planning. Some wetlands need to be totally set aside. These should include representative and special systems of wetlands.
- Include environmental impact assessment guidelines for evaluation of activities that affect wetlands.
- Objectives should result in no building on flood plains, slough drainage, destruction of brush around sloughs and road construction that destroys wetlands.

3) Variability in the type and distribution of wetlands throughout the province must be recognized when wetland management objectives are being developed. Different management strategies may be required in different areas of the province.

Most comments agreed with this strategy but there was some concern that this could be interpreted as a means of permitting drainage in some areas. Others felt that if all drainage was stopped no further strategies would be required. Many suggestions dealt with the specifics of criteria used to define areas or management options.

- Some broad policies and objectives should be set out but it is important that they are flexible enough to allow for different strategies in different areas and where different environmental conditions exist.
- This seems to suggest that widely occurring wetlands could be converted to other uses. This would be a mistake.
- Should be worded that different strategies "will" not "may" be required.
- Logical as long as the environment is given the first concern.
- Do this instead of more studies.

- This philosophy justifies drainage and is responsible for much of the current loss in quantity and quality of Alberta's wetlands.
- Even in one area of the province all wetlands should not be managed in the same way.
- If wetlands are protected from being destroyed, no matter where they are, then they will manage themselves.
- Agree, but management strategies must always be within the limit of the policy.
- Agree, but make sure that the strategies are acted upon by all levels of government.
- No, the priority should be the preservation of wetlands and surrounding uplands.
- Public input is needed in setting the different strategies.
- Some wetland conversion may be acceptable in the north where they are abundant but only after key areas are identified and protected and not at government expense. In the south the need is to restore wetlands lost to development and drainage. Include non-permanent wetlands.
- The focus should be on conservation and enhancement.
- Should be concerned with restoring wetlands for wildlife in the south and protecting wetlands in the north. Strategies should be integrated with forestry practices.
- Consider the role of wetlands in the hydrologic cycle.
- Maintain a chain of wetlands from north to south to accommodate migrating birds.
- Base different strategies on factors such as microclimate, groundwater discharge/recharge areas, uniqueness of wetlands and spatial distribution.
- Develop wetlands in areas where they did not occur before.
- Management strategies should not include sacrificing wetland health to industry or municipal concerns.
- Identify objectives for each major type of wetlands and add another wetland type to your definitions: riparian systems. Objectives should be based on wetland type not geographical area.
- Preserve as much water as possible.
- Strategies should lock together and overlap in larger, provincial plan.
- Strategies should be well founded ecologically but flexible enough to allow for socio-economic development requirements.
- Regions should be based on geological, hydrographic, climatic, natural history and other factors which contribute to the uniqueness of an area.
- Recognition of this should mean that representative wetlands in each ecological region of Alberta be fully protected.
- In addition to the variability of wetlands, variability in the wildlife they support and the agricultural practices and other land uses surrounding them may be factors in determining specific strategies and regions.
- The interests of local communities and their involvement in the use of wetlands may also be relevant in determining regions and objectives, particularly in the context of educational value and passive recreational use.
- This is alright as long as the policies do not favour certain areas. Guidelines should be established to ensure equivalency in meeting the objectives. There needs to be a system for fair, consistent review by professionals outside of government.
- This is a good idea but the unsettled area or Green Area should also be included.
- Base areas on ecozones.
- Fine, as long as varying public pressures throughout the province do not result in wetland ghettos.
- Urge relevant planning boards and municipal councils at the local level to have evaluations done in order to preserve significant wetlands.
- Good idea but proceed with making preliminary statements on general management strategies.

Education and Awareness Strategies

Two education and awareness strategies, proposals for informing Albertans about wetland values and benefits, were suggested in the draft policy. There was strong support for these initiatives and many respondents combined their comments.

1) Emphasize the benefits of wetlands to governments and landowners, and encourage management of wetland resources that will provide multiple benefits.

Almost all the comments were in favour of emphasizing the benefits to government, landowners and others but many respondents questioned the feasibility of managing all wetlands

for multiple benefits. Some also suggested ways of implementing this strategy.

- These two points are perhaps the most important keys to ensure a successful program.
- This is key to the success of these policies. Public attitudes shape public support.
- This is more important than conducting inventories and establishing objectives and can begin now, before other strategies are completed or begun.
- There is already considerable public awareness of the value of wetlands; public education campaigns too often become excuses for delaying action to directly confront an issue.
- Our service board feels that this is the area that should have the most effort.
- Governments do realize the benefits of wetlands.
- Key factor in successful programs to manage and conserve wetlands.
- Education is important but convincing landowners will not be easy.
- Essential. Governments should already be aware but it is the public that must see and feel the benefits.
- Agree, wetlands as a wildlife resource have a tremendous tourism benefits for the province.
- Include information on taxpayer costs to obtain the benefits and on financial costs when wetlands are drained.
- Derive and promote an understanding regarding the ownership and management of wetlands.
- While it is desirable to try to please everyone with multiple benefits, there needs to be education of all concerned about the priorities, expectations and responsibilities for good wetland management.
- Include awareness about the extent of loss and damage.
- After "provide multiple benefits" add "and sustainability; or, and benefactors; or, that are environmentally conscious".
- Landowners need specific "how to" information.
- Yes, but do not channel too narrowly to multiple benefits; education should focus on a wider understanding of how wetlands work in the total ecosystem and on regional differences and the economics of draining versus maintaining.
- Educate people to understand the intrinsic value of wetlands.
- The urban population needs to better understand the problems wetlands create for farmers.
- Consider the benefits to the flora and fauna, not just the people; keep the conservation and preservation of wetlands a priority and be aware that some non-consumptive uses of wetlands destroy the value to wildlife and plants.
- Stress the function, dynamics and ecology of wetlands showing the linkages among various components of the environment.
- Alright but note that wetlands allowed to manage themselves without human interference provide multiple benefits.
- Recognize that multiple use may not always be appropriate. All uses cannot be attempted on each wetland; if one benefit is of particular value other uses should only be permitted to the degree that they do not interfere with primary benefit. Also recognize long term versus short term benefits.
- Include information on the importance of Alberta's wetlands to the North American waterfowl population and the province's commitments under the North American Waterfowl Management Plan.
- Define benefits.
- Emphasize shared responsibility and make sure positive remarks outweigh the negative ones.
- Need to have facts to present to ratepayers to prove that maintaining wetlands is to their benefit.
- Teach by example with a good policy for use of Crown lands.
- The goal of education should be voluntary compliance with the objectives of the policy; need to stress positive aspects of preservation.
- Include information on road construction that does not degrade wetlands.
- Balance benefits with threats; should not all be one sided.
- Tie in with the Adopt-A-Stream program.
- Succession of words does not satisfy a landowner. There must be a financial reason.
- Get local landowners to participate in inventory, then they have a piece of the action.
- Get involved with demonstration forests and interpretive trails.
- Include information with hunting licences.
- Use a program like "Participaction" to reach people who are not aware or interested. Those that are aware are already involved.
- Include public and all significant stakeholder groups in development of program.
- Include in the education curriculum.
- Given the current loss rate, start education as soon as possible.
- Public must have access to easily available and understandable information.

- Government representatives should attend meetings at local government centres and with local agriculture service boards. District agriculturalists should communicate requirements and information about wetland benefits.
- Include in 4-H programs and in curriculum at agricultural colleges.
- The Alberta Water Resources Commission should take the lead role in doing the educating.
- To convince the public of the importance of wetlands, government must enforce existing legislation that protects them, and all government departments must adhere to the policy.
- Work with key public opinion leaders, chambers of commerce and municipal offices.
- Use Environment Week; put up displays.
- Need to know more to evaluate benefits and impacts of various uses, so include research on impacts of existing management policies in this strategy.
- Landowners must be a priority target since they control 73 percent of the area; the Department of Transportation and Utilities is another.
- Teach the teachers.
- Educate municipal governments that wetlands enhance a city and have greater value than development.
- Greatest need is to educate politicians to change government attitude. Also need to include farmers and industry.
- Include information about the Public Lands Act and the implications of ownership.

2) Emphasize the benefits of wetlands to all Albertans.

This strategy received uniformly favourable comment. Some responses suggested material to be included in an education program, many more suggested ways to implement a program.

- Most definitely! Wetlands are an important misunderstood resource. If every Albertan sees the benefits of wetlands then conservation and management will be a cooperative movement.
- Education and public awareness are always the aim.
- Definitely do everything possible to make all Albertans aware of the benefits and importance of wetlands through whatever means of education is available.
- Emphasize the role of wetlands in the natural/physical environment and the balance they provide for the total environment. They are part of the ecosystem.
- Educate urban society about damage being done through wetland degradation and marginal land mismanagement.
- Increase public appreciation of the cost to farmers and foresters of leaving wetlands.
- Publish aerial or satellite photography annually to illustrate loss of wetlands.
- Emphasis should include a dollar value for wetlands that is consistent with adjacent land.
- Inform urban Albertans about current agriculture practices and how wetlands could be integrated into them.
- Emphasize the right and duty of all Albertans to protect wetlands.
- Emphasize benefits but make people part of the solution.
- Emphasize future benefits, dollar benefits, local and global benefits, wildlife benefits, recreation and ecotourism benefits.
- Emphasize the essential role that wetlands play in the maintenance of the existence that we enjoy in the province, not their benefits.
- Include the necessity to save over the long term.
- Require training in wetland values for those working in activities which affect wetlands.
- Wetlands must be controlled to be beneficial.
- Emphasize the negative aspects of retaining and/or draining wetlands.
- Stress the benefits of improved water quality using actual measurements from specified wetlands.
- Provide for and emphasize interpretation of wetlands in cities.
- Sell wetland protection on basis of insight and understanding not on benefits derived.
- Yes, but not as government propaganda for water management; include full range of variety of wetlands and opportunities and accurate quantification of benefits.
- Recognize that wetlands are not free.
- Important that all interested parties take part and coordinate efforts.
- Incorporate benefits of wetlands into all environmental education programs.
- Use schools since educating the young is the most effective way of ensuring knowledgeable citizens in the future.
- Television ads can make a strong impression on the public, especially if modelled after the Ducks Unlimited or hunter safety (e.g. Lanny MacDonald) ads.
- Use other education programs such as 4-H,

Hunter Education, Project Wildlife.

- Use interpretive programs at provincial parks and campsites.
- Create educational materials suitable for schools with a resource kit for teachers.
- Non-government organizations such as Ducks Unlimited and tourism associations should be part of this emphasis. They can do it more economically with some volunteer labour and their members are already in the field talking to Albertans.
- Have an "Adopt-A-Slough" program. Corporations could be encouraged with tax breaks for adopting habitat areas; they would also have a good public image.
- A good tool would be Access Television.
- Provide funds and programs, videos, field trips; (e.g. videos for schools at no charge).
- Have information phone lines and a referral system.
- Hire well known, popular figures for testimonials and presentations.
- Structure so that formal, community and public education sectors are served and all parts of the settled area are reached.
- Program should be undertaken by a wetland agency.
- Have farmers develop their own wetland management plans through attendance at special classes; society should bear the cost.
- Focus education and awareness activities on those involved with wetlands; all Albertans only need to be aware of wetland benefits in a general sense.
- Include Transportation and Utilities.
- A high profile education program especially for landowners, local councillors and children is necessary to stop or slow the yearly decline in wetlands.
- Establish cooperative research projects with universities.

Wetland Management Strategies

Six management strategies were suggested in the draft policy. The comments received were very thoughtful and offered many suggestions for alternatives and implementation.

1) Drainage of permanent slough/marsh wetlands should not be permitted.

This proposed strategy received a great deal of comment. Most supported the need for strict control of drainage of permanent wetlands. Some felt that this statement was too restrictive and suggested more flexible alternatives.

- Yes, with no exceptions. Cities and their occupants can live in close harmony with these areas.
- Consider a no-net-loss policy or a policy of alternate enhancement or providing increased wetlands in exchange as being more flexible.
- There should be some flexibility in that it may be in the best interests of all concerned to drain some sloughs. The case for mitigation should be considered here in the context of the balance suggested in the statement of principle.
- This must be strictly enforced. These areas provide environments that sustains a number of different and rare species of birds and plants.
- This is particularly important in southern Alberta.
- This is the second main policy point. Wording needs to be stronger: will not should.
- Excellent. This kind of clear position is needed in other areas of the document.
- Expand this strategy to include other threats to wetland ecology such as filling, chemicals, hunting and recreation activities.
- Too absolute; consider setting limits but do not prohibit.
- Too prohibitive; a diversity of solutions serves both society and individuals and, therefore, should be sought and encouraged. Drainage should be allowed for solid, worthwhile goals.
- If accepted this would severely restrict major highway construction.
- This is a sensitive area to private landowners. An acceptable alternative could involve long term government leasing of wetlands on private property and tax concessions for not cultivating.
- Agree, since virtually all permanent slough/marsh wetlands are owned by the Crown drainage is inexcusable.
- Should consider including nonpermanent wetlands; especially those over 2-5 acres.
- A clear, workable definition of permanent is required that allows for the periodic drying of some, even very large, wetlands that should be considered permanent.
- Drainage may be feasible if water is redirected

or located on property (i.e. consolidation). This reduces concerns for wetland loss while providing better economics for landowner.
- Water level fluctuations should be permitted for backflooding and grazing.
- Consider prohibiting drainage of water that is saline or acidic.
- This may not apply in the north where there are considerably more wetlands.
- Specify the consequences of illegal drainage and provide the necessary regulations and enforcement.
- What about beaver actions?
- Restoration of some wetlands could be considered.
- This is paramount for keeping species alive until wetlands are balanced once again.
- This is a good strategy but compensation should be provided to farmers based on acreage or economic value of wetlands to ecosystem.
- Some sort of hearing process, perhaps a local board, needs to be established to decide individual cases.
- Simply enforce Section 3 of the Public Lands Act with stricter regulations.
- Drainage should be allowed for activities deemed to be in the best interest of the province (e.g. mining), especially if full mitigation is required.
- Remove all incentives and subsidies for drainage so landowner makes his own economic decision, but allow drainage of small marshes which are a great inconvenience to landowner.
- Control, rather than prohibit, with a permitting system that could include environmental impact assessments or Natural Resources Conservation Board approval and first hand, visual assessment.
- Good, also the margin of the wetland should not be disturbed as this provides important wildlife habitat.
- When possible, improve wetlands to compensate for damage already done by optimizing wildlife production and multiple benefits on remaining wetlands.
- Implement disincentives, such as the U.S. "Swampbuster" legislation.
- Consider reestablishing those already drained and now not too productive.
- A possible method of achieving such goals would be to establish a wetland registry and require landowners to obtain a licence to drain.
- Local planning authorities can discourage drainage or conversion by appropriate policies in planning documents and when considering development and subdivision appeals.
- If an area is a permanent wetland then it should never have been released for agriculture and it should be purchased outright from landowner.

2) Financial and other incentives should be provided to landowners to maintain nonpermanent wetlands and wetland margins in accordance with management objectives.

There was a variety of opinions on this strategy ranging from full agreement to suggestions that maintaining nonpermanent wetlands should be done strictly by legislation and regulatory control. Most agreed with the principle that society should at least assist the landowner in maintaining a public benefit but many also pointed out that the landowner has some responsibilities for stewardship of his land for present and future generations. Restructuring existing grant programs and land tax adjustments were the most frequently suggested methods of implementing this strategy.

- Agree. Farmers should not bear the costs of maintaining benefits to society. They should bear more of the costs of drainage on their own property, especially if there are regional consequences.
- Not necessarily. But encouragement and information for maintaining wetlands could be useful.
- Yes, people usually need incentives to cooperate but it is important that we do cooperate.
- Landowners may protect wetlands out of a sense of social responsibility.
- Yes but need to include in the strategy that financial and other incentives to drain wetlands must be discontinued.
- Yes, cannot expect individuals to pay for common social benefits. Some personal responsibility must be expected, however, without public compensation. Wetlands should not be an excuse to milk the public purse.
- Would be crucial as many farmers/landowners would view this program as an encroachment upon their right to private ownership.
- Agreed. There has to be value based on the best use or else straight economics takes over.
- Legislate protection; wetlands of regional, provincial or higher significance should be protected by designation.
- Landowner must receive a direct benefit.
- Disagree. Nonpermanent wetlands should not be maintained as wetlands.
- Agree if the objective is to maintain ecosystem

viability. Wetland margins should be included.

- Incentives should not be provided for consolidation; it is not good as the temporary water is needed in the spring and the privacy of small wetlands is important for some nesting species.
- No to positive incentives to maintain existing wetlands; fines and penalties for non-compliance should be heavy.
- What would be the source of funds to carry out this strategy?
- This is an integral part of a program to compensate farmer for lost livelihood due to continued retention of marshes.
- No! The value should be social, not economic. The public (e.g. ratepayers, hunters, users) should have input into funding of drainage projects.
- Do not pay landowners; introduce friendly guidelines.
- Do not agree. Title to land carries responsibilities to the public at large. Restrictions on land use should become part of the title just like easements or liens.
- Any incentives should only be to resident, not absentee, landowners, thereby encouraging small towns.
- Agree; landowner needs help to maintain and to offset some of the resulting costs (e.g. crop damage) because both they and the rest of society are benefitting.
- Absolutely necessary. Pay us enough and we will turn over the whole area for wetland retention.
- Agree in principle but what criteria would be used to select which landowners would be given incentives.
- Also do not bring marginal land into production. Society should not be providing drainage assistance on land that should never have been put into production.
- Yes, within budget limits. Critical areas may need to be purchased by government at a fair, not excessive, price.
- Use only if other alternatives such as education will not work.
- Only if benefits can be individually defined. This could lead to strong arguments made by farmers to have subsidies to maintain all kinds of land in a non-agricultural state.
- Place more responsibility on landowners. Society should not have to pay for individual greed or uncaring. Landowners must realize that they are buying or selling privilege to use land for an insignificant moment in time; it has to be there after they are gone.
- Consider how this applies to control of draining reservoirs; most often ours is drained dry jeopardizing waterfowl, recreational use, safety and aesthetics.
- Approach this like the Soil Conservation Act.
- Yes for permanent and nonpermanent wetlands in accordance with overall management objectives and then society is paying the costs of the wetland not the individual landowner.
- May not be financially worthwhile to maintain nonpermanent; money might be better directed into creating or maintaining more permanent wetlands.
- Farmers/landowners should be responsible for damage to other lands when they alter natural watersheds on their own land.
- Use voluntary agreements between landowners and management agencies such as the Cooperative Ventures Program.
- Encourage funding from agencies with an interest, especially outside of government.
- Restructuring of grant system for drainage to allow for incentives not to drain.
- Good but could go further to suggest removing other grants/benefits coming from the public pocket to landowners who insist on drainage.
- This may be the place that municipalities could become involved.
- Should be a provincial not municipal government responsibility. If there is to be a joint approach it needs to be clearly stated and outlined in the wetland policy.
- Where does the money come from when cutbacks are a necessity; possibly land taxation structure could be regulated to provide this incentive. Also to assist soil conservation.
- Abolish the present grain quota system and base it instead on acres owned or rented.
- Incentive programs don't often work. Private organizations could offer the incentives. Could be a tax penalty for not complying with accepted guidelines.
- Stop funding of drainage. This is a costly program, assuming tax and cash incentives. Government programs should be limited to areas with a conservation plan in place. Compensation should be adequate with access to other government programs commensurate on a wetland plan.
- Any land that may be returned to wetland should be recaptured and the landowner compensated. In the long run the economics of tourism will outweigh the production return of crop from the land.

- There should be incentive for maintaining wetland margins on permanent sloughs.
- How will the money be regulated? Half could be used to lower taxes on land with wetlands.
- Landowners should have option of maintaining title to wetland with a restrictive covenant against title protecting wetland or selling a wetland parcel to government at fair market value.
- Other incentives should include sound advice from district agriculturalists to minimize influence on field operation efficiency, weed infestations. Actively promote desirable forages (e.g. reed canary grass) on wetland margins.
- Farm operators and landowners expect a return on their investment which shouldn't be denied. Wetland enhancement projects may be required to compensate for losses due to development in other areas.
- Consider paid, registered easements as done by TransAlta Utilities.
- It might be more productive to use incentives to encourage slough consolidation to make permanent wetlands from temporary wetlands.
- Allow marketplace to determine which lands should be retained/developed for wetlands. Incentives or compensation could be part of marketplace economics.
- Compensation in the form of tax relief, grants or lost crop payments; not in form of licensed hunting preserves or fee for hunting areas.
- Maintained wetlands should be stocked with fish for use by the owner.
- Don't double subsidize or provide conflicting subsidies.
- Remove any tax or financial incentive to convert wetlands.
- Tax rebates are likely the best way; also maintain water consolidation programs like Alberta Agriculture's Flood Damage Reduction Program.
- The importance of maintaining the nonpermanent creeks which connect these wetlands must be recognized.
- Provide seeds, shrubs and cat work to landowners to enhance wetlands.
- Yes, but farmers should pay all costs of drainage.
- Retention incentives should include tax concessions, municipal grants, public recognition and awards.
- Follow programs such as Alberta's Landowner Habitat Program, Saskatchewan's Prairie Pothole Project or the U.S. Wetlands Acquisition Program.
- Eventually but first control budget deficits and debt. Eliminate taxes on wetlands that are conserved or retained.
- Provide financial aid for constructing or rehabilitating appropriate wetlands.
- Provide incentives for wild rice growing.
- Same incentives should be provided to permanent wetland owners.
- Must have long term commitment from landowners to do this.
- Nonpermanent wetlands and margins should be tax free if they are not used. Revenue lost here should be recovered by doubling taxes on those that are used.
- With an overall management plan, incentives to improve or protect wetlands beyond the objectives need not come from government.
- Recognize those farmers who have already protected wetlands.
- Acquisition of wetlands, including riparian areas and suitable buffer areas, on behalf of the public should be actively pursued.
- Need well coordinated communication system between landowners and government for education, assistance and response to grievances because government may not always be able to meet financial commitment.
- Lower taxes may not be enough and this affects the local tax base.
- Make landowners responsible for true present and future costs of ill effects from drainage.
- Need both carrot and stick.
- Farmers must register and take measures to ensure maintenance or improvement before becoming eligible.

3) Management of nonpermanent wetlands may include controlled drainage if regional wetland benefits are sustained.

Support for this strategy was not as strong as for most others. Many disagreed seeing this as a loophole for further drainage. Of the majority that did agree most suggested particular circumstances or constraints that should be applied. Maintaining regional wetland benefits was stressed as absolutely necessary. There was obviously some confusion regarding what is meant by controlled drainage.

- Yes, use if required as long as no detrimental effects are purposely caused.
- Yes, controlled drainage does not mean drainage, it means making the best use of available water.
- Draining of nonpermanent wetlands between

permanent ones could result in wildlife impacts due to a loss of travel corridors.
- Loophole. Where are the limits and how will species that depend on smaller wetlands be protected?
- Disagree strongly! Nonpermanent wetlands are a unique and valuable part of the prairie ecosystem. Leave them alone.
- I cannot see many cases where the principle of maintaining wetlands, permanent or not, should be recognized.
- Not sure of the implications of this statement; need more information.
- Drainage only if consistent with objectives established for wetlands in that area.
- Alright in principle but in practice may be dangerous. Who will determine what the benefits are, whether they will be sustained? Are there resources available to do this work?
- If drainage proceeds and sustenance proves impossible there is little chance that the loss can be recovered.
- Nonpermanent wetlands should not be drained.
- Could be important where cooperation from landowners is difficult to obtain.
- Only if man's intervention has caused a problem. Natural cycles should be left alone.
- There should be a no-net-loss policy.
- Add "and if there is either a new gain, or at least no-net-loss, of regional wetland benefits including wildlife production, biodiversity, groundwater recharge and flood protection." Otherwise there will be an incremental loss of most productive wetlands.
- When controlled drainage becomes a policy there is bound to be misuse of it for the benefit of individuals or companies who have power.
- Why regional? Microenvironments add up to create the total and every little loss ultimately reduces the overall regional or provincial picture.
- This is one alternative that should be retained.
- Not generally acceptable; it encourages the piecemeal loss of small wetlands which are most important in exchange for larger, less productive water bodies.
- May not be worthwhile to manage nonpermanent.
- Yes but add "or improved."
- Yes, as long as it does not unduly affect the drainage system in wet times thereby hindering other landowners.
- Raises the question of one landowner being able to drain and another not; compensation may be an issue.
- Okay if just sheetwater is being drained and not semi-permanent wetlands.
- Agreed as long as the policy deals with each individual case and wetland on its own merit.
- Only if this is a rational, well researched option considering all the consequences and impacts to all wetland functions and values and to the region and if it makes economic sense.
- We should be expanding our wetlands, not just sustaining benefits.
- Only to create or enhance permanent ones.
- Public funding only if public benefits.
- Key is benefits that outweigh losses in both the short and long term.
- In marginal agricultural areas land should be returned to natural and treed state.
- Necessary in some cases. Need to appreciate that landowners have to make a living. Times have changed since the one-quarter farms and expansion to nearby land is not always possible.
- Would allow maximized benefit of wetlands providing proper timing of drainage control occurs. Natural systems should be modelled to ensure that species preference does not cause extinction of rare life forms.
- There must be no erosion damage elsewhere because of the drainage.
- The general character of the area should also be maintained.
- Must have a full environmental impact assessment with public participation first.
- Much depends on communication with the landowners and monitoring.
- Include converting previous uncontrolled drainage to controlled where regional benefits can be realized.
- Need to explain what is intended.
- Need to define regional, benefits, permanent, nonpermanent, and controlled drainage.
- Flooding of a surrounding area seems to be considered a wetland when it is really poor management in the first place.
- What is the management alluded to here?
- Would be acceptable if the landowners with the regional wetlands were compensated.
- Consolidation may be an appropriate method.
- First research wetland systems and impact of controlled drainage. Nonpermanent wetlands are poorly understood and their importance has not always been recognized.
- Perhaps, but such actions would have to be carefully monitored.

4) Public lands containing significant wetlands should be maintained in public ownership. The provincial government should consider the option of purchasing or leasing private land that has significant wetlands or wetland margins that are associated with flooding.

Almost all responses agreed with this strategy. Concerns were expressed regarding the government track record on managing public lands, on the source of funds for such a program and on controlling access to these lands. A number of implementation suggestions were made including recommendations on whether leasing or purchasing should be the method of choice.

- Do this instead of talking and spending on research.
- Marginal land is best put into a public reserve; numerous sloughs reduce the value to agriculture anyway.
- Not certain the government needs to control the land but they should control the use of wetlands as a valuable resource regardless of who owns the land.
- Change "should" to "must".
- The point is to conserve and manage wetlands regardless of who owns them.
- Yes, especially purchasing critical wetland habitat.
- Wetlands can be secured under private ownership without significant societal cost using zoning.
- Although there is often too much government intervention, I believe this is a time for government to ensure the preservation of wetlands.
- Yes, but also need an incentive for owners to dedicate land.
- It would be better to preserve wetlands through education and financial incentive; could be a conflict between public ownership and public use.
- Very short sighted, think of the many opportunities for commercial non-consumptive wetland use.
- Careful, sometimes government has mismanaged wetland resources much worse than private landowners.
- "May" not "should" and "annual flooding" not just any flooding.
- Yes, wetland protection should have priority in such cases.
- A landowner who acquires a tract of land with a wetland must accept that as part of his holdings; if doesn't want the wetland then he shouldn't acquire the land. Who was there first - the wetland or the owner?
- This removes the economic burden from the landowner and ensures protection through public purchase and management of public benefits. Far superior to landowners charging for public access or to subsidy programs.
- Agree mostly, although if land use is financially and socially sustainable then it should be privately owned but with surface rights reduced and surface responsibilities increased. Custodianship, not subsidies.
- Yes, any land not suitable for agriculture should remain in public lands.
- Most effective way of maintaining some of these areas; better guarantee of area remaining in natural state.
- Needless expense IF have policy and legislation in place and enforced to protect and enhance wetlands and a system to allow public access to a reasonable number of wetland types.
- Agree but need to secure public lands so the government cannot sell them to individuals or companies.
- Agree, then these lands should only be used for conservation of the wetland environment.
- Yes, at least the policy can be enforced on public land; private owners will not necessarily follow the policy.
- Yes, and make it easy for government to lease or purchase private land.
- If funding is provided for rehabilitation of wetlands on public or private property then access by public for recreational use should be guaranteed.
- Perhaps the government should buy all wetlands but establish access agreements with each landowner; especially in the priority areas.
- Should include restriction of recreational use, no motorized vehicle access or use.
- Yes, and move now to control wetlands in the unsettled area.
- Careful, competent management will be required to take care of weeds, waterfowl, grazing, other agriculture concerns and sensitive margins.
- Agree, need an integrated management approach.
- Need to define "significant". It should include even small ponds of a few acres and public should own all large wetlands and some of the surrounding land.
- Public funding should be available to local groups to undertake this activity; provincial government is too far removed.
- Use Buck for Wildlife, licence fees and lottery monies.

- Consider non-government organizations and private foundations for land acquisition (e.g. Ducks Unlimited, Alberta Wildlands Trust Foundation, Natural Areas Program's Volunteer Steward Program and the Nature Conservancy).
- Put first action and first dollar in central and southern areas that have the least wetlands left.
- Will have to monitor publicly owned wetlands to ensure proper use and management.
- Removing all incentives to drainage might be almost as good.
- Consider establishing formal protected areas which are ecologically significant and protect as ecological reserve or natural area. Prioritize candidate areas.
- Good, need public notice of how much of each tax dollar goes into keeping public ownership then public might take more interest in management. More buy in is required by public both in concept and in real dollars.
- Need legislation allowing restrictive covenants to permit public protection through private ownership; this costs less than acquisition and is more publicly acceptable.
- Muskegs should also remain in public ownership; they are too valuable for water retention. Forestry should be prohibited from draining muskegs to grow trees.
- Wetlands should only be purchased over time (when landowner wants to sell) and not at inflated prices.
- Keep roads out of these areas.
- Agree, but compensate landowners for damage caused by wildlife and prevent lands from becoming fire or wildlife hazard.
- Leasing could achieve a peaceful co-existence with maximum flexibility.
- This is neither necessary nor sufficient to get sustainable wetlands. Sell public lands to conservation groups, citizens or corporations if their intended use is compatible with overall objectives. Caveats and restrictive covenants can be used to ensure no changes in plans.
- Concerned that policy not be too heavily dependent on government commitment to provide financial resources for purchase or long term lease.
- Focus on retaining public land first since purchasing/leasing is more costly and controversial.
- Combine with federal government initiatives to reserve habitat.
- Wording should be "be integrated into" rather than "consider". Need parallel statements for permanent and nonpermanent.
- Public lands should be available for non-destructive lease purposes but need wetland lease management planning.
- Some purchased areas should become undeveloped parklands (except for small parking lots and marginal trails) open to public.
- Yes, for example the lands bordering the Sturgeon River system.
- Also, buy back land, especially wildlife staging areas, that have been drained.
- Agree but do not expropriate land. Provide assistance to prevent flooding.
- Yes, but purchase only where there is danger of abuse or an individual is seriously financially handicapped by maintaining wetlands.
- Allowing public land to be sold subject to a watercourse agreement registered as a caveat does not provide sufficient protection.
- Yes, in future do not release essential wetlands; hard to take back once given.

5) Consideration should be given to creation, enhancement or use of wetlands as water management tools for the purposes of flood control, water quality improvement or regional wetland consolidation.

While most comments received were favourable, this strategy received more cautionary and negative comments than any other, generally directed towards the consolidation aspect. Many people felt that this could be a loophole to permit drainage. Others were concerned that the natural productivity and benefits of the wetlands would be lost. Those in favour saw it as an opportunity to conserve water, as well as wetlands, and as a much needed method of flood control.

- Flood control is a waste of money since precipitation is so variable; better to legislate against development on flood prone land. Do not enhance or create wetlands except in places where past development has destroyed them.
- Regional consolidation is not sustainable development; it is drainage!
- Sensible and obvious.
- Management and making the best use of wetlands will insure their preservation.
- Yes, but that should not include the use of weirs, dams or ditches; leave as natural as possible.
- Very unlikely that wetland consolidation would

maintain the same values as the natural, individual wetlands.

- This only makes sense. The new green attitude should alter our thinking and allow us to study how mother nature got the job done before we thought we knew a better way.
- All these things need to become part of an overall plan.
- Definitely should be done; it is cheaper to keep people and livestock out of flood plains than compensate for flooding.
- Basically no; in this lies the seeds of all sorts of political manipulation and favouritism. The original policy of saving wetlands would disappear.
- Healthy wetlands shouldn't be viewed as a tool or a means to an end. Instead they should be viewed as the end objective.
- Consolidation serves only one purpose, to provide the farmer with an easier field to farm. It does not fit any of the other criteria under a wetland policy.
- Should definitely be one of the policies, as tangible benefits would be shared by the landowners and not just the duck hunter or for recreational purposes.
- Who pays?
- Good but already is being done; need to make the public more aware of this.
- Yes, all natural sources should be utilized to their advantage as long as wetlands are not damaged.
- Only in extreme circumstances. We will be creating an ongoing cost of public maintenance and could create or intensify downstream problems as have done in the past.
- Agree with creation and enhancement; need more of this.
- Regional consolidation does not make any sense; seems too much like a structural (i.e. build a dam or divert a river) approach to water management that is outdated.
- Need more information.
- In the future all clean water will be a valuable resource; this strategy would assist water consolidation.
- Very good, as long as it does not mean building on-stream dams.
- Yes, as long as the ecological integrity of the wetland is not compromised and the wetlands are not overly developed; environment first.
- Yes, for example the Hay Creek area should be developed and managed to assist in controlling spring runoff.
- Regional consolidation only results in flooding of wetlands and destruction of the diversity of wetland types.
- Consider very locally and as the exception rather than the rule; remove incentives to build on floodplains. Flooding is a natural phenomenon and floodplains are natural geological structures.
- Enhancing use of or creating wetlands is agreeable as long as it can accommodate both sides of the question.
- I agree with wetland creation where areas have been lost in the past. But wetlands should not be used for flood control, flooding is part of a wetland system.
- Yes, Shepard Slough could be used for stormwater runoff from Calgary and this would also improve the quality of Chestermere Lake for recreational use.
- Yes, but ensure that management for one objective does not mean loss of other equally important benefits from the wetland.
- Need better understanding of the entire system and the way it functions as well as the potential consequences of such projects.
- Yes, as long as the integrity of the wetland ecosystem, including the well-being of the flora and fauna, has first priority.
- It should be mandatory to enhance wetlands when using the Alberta Water Management and Erosion Control program.
- Consider enhancing the economic benefit to landowners with projects such as spring backflood of haylands, stockwatering and irrigation.
- Consolidation reduces the value of nonpermanent wetlands.
- Yes, but need to work with landowner on development of land for dual use without expecting him to give up all property rights; need incentives.
- Add: "in conjunction with associated opportunities and options (e.g. backflood, fishery, waterfowl, irrigation and groundwater recharge) that create wealth and benefits.
- Agree, consolidation should be paid for by the benefitting landowners.
- Add: "on condition that there is either a net gain, or at least no-net-loss, in regional and provincial wetland benefits including wildlife production, biodiversity, groundwater recharge and flood protection".
- The influence of past and future road development should be reviewed; use road ditches for regional wetland benefit.

- Include the forested area in such considerations.
- Great idea but remember to include great areas of upland cover around the wetland.
- Government should control more stream basin land so it can play a larger role in regional wetland and flood control. Should research water quality aspects more.
- Would have to take into account the necessity of monitoring private landholders who are receiving incentives to make sure they are complying with conservation policies.
- Projects must be subject to environmental impact assessment, public scrutiny and public input before the fact; government must bow to public opinion.
- Agreed but what level of government legislates this?
- Yes, could provide for water quality improvement and sewage treatment for municipal and industrial users.
- Creation - finally you are thinking. There are many spots in southern Alberta where we should recreate wetlands.
- Use this strategy to enhance existing and replace wetlands that have been removed. Create wetlands on marginal land so good areas are not taken out of production.
- Consider small impoundments in prairie gulleys.
- Good policy; hopefully water management methods can be varied to favour different functions and different species with different habitat needs.

6) A more complete understanding of wetland functions and processes is necessary for effective management. Research priorities concerning wetland management should be identified.

Almost all responses agreed with this strategy; many had priorities to suggest. Most of those that did not support it fully still suggested that research was necessary but immediate action to conserve and manage wetlands was a higher priority.

- Research is crucial for any resource management and priorities must be identified if research is to be efficient.
- Understanding is essential to convince anyone of the need to establish and pay for management procedures.
- Wetland functions must be understood and quantifiable before we can be assured that various tradeoffs represent no loss.
- Agree; if we can properly quantify wetland values then cost/benefit analyses of wetland drainage will be more realistic.
- Understanding is key to management but must not waste research funds on projects that advance science but not necessarily wetland management.
- This seems to be a necessary preamble to developing planning or other management strategies.
- Yes, but be sure we still have our wetlands; do not hold off on action to protect remaining wetlands.
- Research should not be neglected but the policy should not be delayed as we have sufficient information now.
- The need is not to manage but rather to save/keep wetlands. If we preserve wetlands and adjacent areas they will look after themselves as viable ecosystem.
- Involve public in setting research priorities.
- Follow identification of priorities with establishment of actual research program.
- One priority should be to assess the value of sedges and lowland forages in purifying water in backflood situations.
- Identify multiple use management, not wetland management priorities; wetlands are only one of the players in overall picture.
- First priority should be identification of significant wetlands.
- Need research on the vulnerability of wetland flora and fauna to alterations in the landscape.
- Determine value of wetlands that dry up during droughts and assess restoration conditions.
- Need to know the impact of removing wetlands on flood control and on wildlife.
- Quantify tax subsidies and incentives encouraging farmers to alter wetlands then compare to programs trying to protect wetlands such as the North American Waterfowl Management Plan.
- Yes, some focus on nonpermanent wetlands.
- Research fiscal measures that would provide most cost effective way to retain wetlands.
- Include surrounding upland.
- Research should include the impact of agricultural chemical use and resource extraction activities.
- Include analysis of reviving drained wetlands or those that have silted in as a priority.
- Research the chemistry, hydrology and ecology of wetlands.
- Determination of function and importance in hydrologic systems including groundwater,

snowmelt and rainfall should be a priority.
- Water quality evaluations are needed to determine rate of pollution and contamination.
- Study the economics and aesthetics of varied attractive landscape versus excessive monotonous cultivation.
- One goal should be wildlife optimization.
- Re-examine peatland management and values. Consider reforestation of harvested peatlands.
- Keep in mind the importance of the network of wetlands, not just the value of an individual one.
- One of the major complaints is weed control.
- Research priorities should include: classification system, economic assessment of non-market values; wetland ecosystem dynamics and processes, pollution buffering, wildlife management through wetland manipulation and biological periphery weed control.
- Add: "and resources of money and people provided to ensure the research is adequate and a sound data base provided and used in making management decisions.
- A proper funding balance must be sought to equalize education and research priorities.
- More money must be available for interdepartmental interdisciplinary studies.
- Funding must be long term and dependable.
- Education is needed to ensure the success of this policy.
- Necessary. The Water Resources Commission should act as a liaison between all agencies to come up with coordinated effort.
- Should not be done by universities since it is not suited to a 2 to 4 year graduate student term.
- Good idea, could this be delegated to universities at less cost than through in-house government department programs.
- Alberta Fish and Wildlife Division and the Canadian Wildlife Service should both be an integrated component of this research.
- Ongoing research is always required but priorities need to be reviewed regularly.
- Disagree; we know what to do. What we need is the will to force good wetland management on people who have other interests.
- No, let us get on with the job of saving wetlands.
- Research is desirable but very expensive and long term since the effect of changes may not be immediately obvious. Very few wetlands should be used for this purpose.
- Wetlands are just as important as mountains, hills and forests. Wetlands are for birds, mammals and fish.
- Common sense tells us most eloquently that agribusiness, road building and industry are the greatest threats and should be carefully screened by public review processes.
- Look at the experience of other countries and areas.
- This should be the first or second strategy.
- Note importance of wetlands in hemispheric populations of migratory birds.

Program Delivery Strategies

Two program delivery strategies were suggested in the draft policy.

1) Government departments should ensure that programs directly or indirectly affecting wetlands are consistent with this policy.

Very strong support for this policy was expressed. Many people suggested that all government departments must comply with the policy and program consistency with the wetland policy was essential.

- Government departments should be required to report to the Legislature on plans to achieve coordinated goals for wetlands.
- Public ideas should be changed to change government ideas and ensure consistency.
- Active coordination among government departments may be necessary.
- Direct and indirect damage to wetlands by all government departments, including Agriculture, Forestry, Lands and Wildlife, Energy and Transportation and Utilities, should be stopped.
- The Department of Highways directing road construction across lakes is obscene (e.g. Lily Lake/Secondary Road 651).
- Land use policies of the regional planning commissions and municipal governments should also be consistent with the policy.
- Consistency with the policy won't happen with the present government.
- Ensuring consistency is easier said than done!
- All government departments must talk the same language and use the same policy interpretations, especially the tax department.
- Federal, provincial and municipal government consistency with policy are required.
- The relationship between the conservation

strategy of the Environment Council of Alberta and the wetland policy should be defined.

- It is better to have departments identify policies that result in wetland destruction and work towards eliminating these.
- Government departments should ensure that wetland effects on landowners are consistent with policy.
- Ministers must understand the problem. They shouldn't work to destroy while pretending to protect.
- Government consistency can't be a blanket policy because conditions vary so much from region to region.
- Support by all levels of government is essential if this policy is to be effective.
- The public should also ensure that programs affecting wetlands are consistent with the policy.
- The Buck for Wildlife program should be consistent (e.g. opposes cattle grazing near wetlands then pollutes with nesting bales).
- Existing and proposed policies should be reviewed and amended in context with this policy.
- Government programs should be open to the public.
- Major revisions to Alberta Agriculture's wetland policies are needed to be consistent with the policy.
- Responsibility for ensuring consistency with the policy should be assigned.
- Indirect involvement with wetlands will have to be defined also.
- The government must continue to abide by this policy over the long term.
- All parties involved in wetland management should follow one common policy.
- Specific roles, budgetary responsibilities and means of enforcing the obligations of different departments should be developed.
- Government departments concerned with water diversion schemes should be consistent with the policy.
- Alberta Environment will need a major overhaul to ensure consistency with the policy.
- Conflicting municipal, provincial and federal government programs that affect wetlands should be eliminated.
- Municipalities should be informed of activities in their jurisdiction so decisions at the local level don't conflict.
- Good communication and cooperation between government departments is essential.
- Private organizations such as land trusts should cooperate with government departments.
- An intergovernmental referral system is needed.
- All departments with anything to do with land should have consistent, cooperative policies.
- Departments should work together when developing and implementing policies.
- Government consistency with the policy should be a law.
- Interdepartmental wrangling over decision making responsibility should be stopped.
- The wetland policy is a policy of the government not one department.
- Communication between the wetland policy and river basin planning is essential.
- Government departments should spend a weekend together in a remote northern bog to discuss wetland issues undisturbed.
- This policy statement should be more definite and detailed with specific, clear statements.
- This policy should take precedence because of many benefits and shrinking acreage of wetlands.
- A strong government policy and the determination to implement it are needed to preserve wetlands.
- Policies should be publicized to attract public interest and support.
- Majority of people support wetland retention.
- Wetlands should be the first consideration over industry.
- The primary objective should be to maintain and enhance the environment for non-consumptive use of wildlife and wetlands.
- The public and farmers should be educated about the benefits of an attractive multiple use countryside.
- More education is needed. We don't appear able to learn from history.
- All governments should be aware of ecological processes and relationships.
- Government policies and practices that favour wetland removal such as drainage and channelization must be stopped.
- The public should have input into wetland management.
- The effect of wetland protection programs on the routing of oil and gas pipelines should be recognized.
- A single agency should administer programs and review procedures and ensure interdepartmental cooperation and implementation.
- A single government agency with a strong legal mandate to protect wetlands is needed.
- Municipalities should be the delivery vehicle for the wetland policy.
- Another government department should not be

created.

- Wetland management should become an integral part of a comprehensive land use strategy.
- Creating a blanket policy for the province should help eliminate inconsistency.
- Counties and the Department of Transportation and Utilties should be required to monitor water quality and runoff volumes in their ditches.
- Alberta should share research results and management strategies with adjoining provinces and territories.
- All current programs which affect drainage should be assessed.
- Alberta Environment, Public Lands Division, Transportation and Utilities and the Energy Resources Conservation Board should be consistent with the wetland policy.
- Cooperation is essential.
- What policy? Drainage is still allowed and may even be encouraged.
- Section 3 of the Public Lands Act should be improved to stop an interpretation that is resulting in the loss of wetlands from Crown ownership.
- Legislation that is based on a real understanding of the overall role of wetlands is required.
- The wetland policy and the new environmental legislation should be related.
- A good wetland policy should be made into law.
- Legislation that is binding on all departments is needed.
- Implementation should be consistent with the policy.
- The Legislature should require each department to report back by a specified time on steps taken to implement the policy.
- The Environment Council of Albert should audit each department for consistency with the policy.

2) Government departments should be aware of intergovernmental programs and those of non-government organizations and private individuals, that may have an impact on wetlands. Furthermore, these departments should support and encourage consistent and complementary activities.

Support for this policy statement was very high and many suggested that awareness, coordination, communication and cooperation among all levels and departments of government was critical to the successful implementation of the policy.

- Resource specialists should be used to increase awareness and consistency regarding wetlands.
- What should be done about activities that are non-complementary with wetland policy?
- Intergovernmental, municipal, provincial, national and private programs should comply with the wetland policy.
- Alberta Transportation and Utilties should be aware of the wetland policy.
- Government awareness and consistency are the most economical way to manage wetlands.
- More coordination is required.
- Private activities should not be allowed to disregard the approved wetland policy.
- Ducks Unlimited should live up to its end of contracts.
- Consistency between all levels of government as well as involvement by non-government organizations and individuals will work the best.
- Many existing initiatives work at cross purposes.
- Government agencies should not duplicate the work of non-government organizations and should cooperate with them.
- The Departments of Environment and Agriculture are involved in farm water management projects that result in duplication and inconsistent policies.
- Better communication is obviously needed.
- Conflicts between agriculture and natural resources should be settled fairly and quickly.
- A mechanism for handling intergovernmental conflicts must be established.
- Government skews decisions in favour of those parties donating the most money.
- Farmer involvement and cooperation are required.
- Few existing coordinating mechanisms function effectively.
- Cooperative projects to restore, protect and promote wetland conservation are required.
- Circulation of information, education and awareness are required.
- Government departments are in competition with one another and cooperation will be difficult to achieve.
- Alberta Education should be involved and put forth a multidisciplinary approach to wetland uses.
- Government staff should be in touch with private individuals who are affected by their activities.
- Government and private organizations should work together.
- Non-profit organizations should be encouraged to become involved in the protection of

wetlands.

- Cooperation between Fish and Wildlife Division/the Canadian Wildlife Service and Alberta Agriculture should be increased.
- Government programs should support wetland protection.
- How will it be determined if activities are consistent and complementary?
- Present government has never had an open ear to concerns before.
- Intergovernmental referral system should include public organizations and concerned individuals.
- Ducks Unlimited should work with government.
- Matching funds or other incentives should be provided to private groups for wetland conservation.
- The Prairie Farm Rehabilitation Administration should be involved in wetland policy.
- Combining all programs will take a lot of effort.
- All departments concerned should be tied together with a geographic information system.
- The government should cooperate and coordinate with organizations like Ducks Unlimited, the World Wildlife Fund, Wildlife Habitat Canada and the Nature Conservancy of Canada.
- Non-government organizations should be supported and encouraged with financial and professional help.
- Integration and the commitment of all parties is very important for the policy to work.
- All programs should be reviewed to uncover inconsistencies.
- The public should be encouraged to contact the government regarding developments on or near wetlands.
- This government will not do anything to help the environment or wetlands.
- The word "should" should be replaced with the word "must" in the policy statement.
- The terms consistent and complementary are too subjective.
- The statement "and oppose or prevent activities which damage wetlands" should be added.
- The statement is too general. All development has an impact on wetlands.
- There may be cases or areas where a wetland policy won't work (e.g. very dry locations).
- A specific agency should undertake an active educational role.
- Public education is essential to the success of the policy.
- Farmers drain sloughs to give them more qualified acres under the hail and crop insurance system.
- All subsidies that destroy wetlands should be eliminated.
- Nest boxes and man-made improvements should not be placed in wetlands. Wetlands should be conserved, not managed and developed.
- Conservation activities by private groups and individuals should be restricted to a few wetlands in the south where wetlands are scarce.
- Wetland management should be under one department (e.g. Environment).
- One agency should monitor wetland management. It wouldn't have to coordinate all activities related to wetlands.
- A specific agency with a wetland management mandate would focus public and government attention on the need to protect wetlands.
- Departments should be consolidated. Forestry, Lands and Wildlife should be under Environment.
- Incentives should be provided to save wetlands and severe consequences for destruction should be applied.
- Bureaucratic interference with incentive programs should be minimal.
- Counties should grant tax exempt status for wetlands and subtract them from the deeded acreage on tax notices.
- Local governments should be informed about wetland preservation efforts.
- Specific guidelines are needed for programs and activities of non-government organizations particularly on public lands.
- The Nature Conservancy of Canada should be supported in its purchases of land with unique qualities.
- Joint ownership or leasing of land would allow monitoring of wetlands by members of society.
- Sufficient fines should be established to act as deterrent for failure to protect wetlands.
- Failure to comply with the policy should have serious consequences.

Legislative Review Strategies

Two legislative review strategies were suggested in the draft policy.

1) All legislation affecting management of wetlands should be reviewed to ensure consistency with approved government policy.

Review and amendment of legislation to ensure consistency with the policy was strongly supported. Several respondents asked for clarification of the reference to government policy in the policy statement.

- The present legislative muddle is appalling.
- Alberta Environment and the public should review legislation.
- Legislation should be concise, understandable, effective, practical and enforceable.
- Legislation should be reviewed to eliminate redundancies, inconsistencies and ambiguities.
- The less legislation the better.
- All levels of legislation should be complementary and consistent with the policy.
- Programs and policies not legislation are the problem (e.g. Environment's drainage and channelization programs, fuel subsidies and the tax system).
- Wetland legislation should include incentives for private protection and review procedures for wetland alteration.
- Strong wetland legislation and policies that promote wetland protection and enhancement are required.
- Wetland legislation should be strict enough so ministerial judgement is not the final decision.
- The Environment Council of Alberta should recommend changes to provincial and federal legislation to protect wetlands.
- Municipal legislation and planning should be reviewed to ensure consistency.
- Action and public awareness are key elements.
- Legislation must be other than restrictive and authoritative to achieve objectives and purpose!
- Other acts may need to be changed to ensure consistency.
- The wetland policy should be enacted within all government departments.
- Wildlife should be an important component of legislative review.
- Legislative review at whose cost? Just do your jobs!
- The phrase "management of" should be deleted from the statement.
- Existing laws such as the Public Lands Act and Surface Rights Act should be addressed.
- Laws must not be used to sanctify destruction of wetlands. Review and changes should be done soon.
- The Public Lands Act should be reviewed with reference to the ownership of bed and shore.
- Legislation will have to be changed to ensure that there is protection for existing wetlands.
- Legislative review should be required by law.
- A good idea but feel it is window dressing.
- Government policy should be in line with existing legislation (e.g. enforcing public ownership of water bodies).
- What a lulu! This should keep many civil servants employed at the taxpayers expense for quite some time.
- Legislation should be subject to public scrutiny for compliance.
- Periodic review and updating of legislation is required.
- The legislative review process should have a definite time table.
- All water management and conservation should come under one act.
- Written approval for developments that affect wetlands should be obtained from relevant ministries in advance.
- Wetlands should be included in statutes relating to development and urban/rural planning.
- A comprehensive legislative review is needed.
- The acts involved should be put into the new Environmental Protection and Enhancement Act.
- Policies should have legislative backing.
- The powers of ministers to review or change policies must be limited or eliminated.
- Policy review should not be a substitute for implementation.
- Wetland policy should be incorporated into all land use plans, including forestry.
- The policy statement should read "determined, communicated to interested public and acted upon in a timely manner".
- Public support is an essential ingredient of any successful program.
- Government policy on wetlands should be clearly spelled out and publicized.
- Wetlands policy is important but is by no means number one.
- Will policy be anything more than words that will do nothing to protect wetlands?
- Consistent policies must be ensured in order to sustain wetlands.
- The approved government policy must be ecologically enlightened.
- Economic sustainability of wetlands and other natural resource uses must be considered.
- Money should not be a factor in the preservation of wetlands.
- The environment or wetlands should not be a political feather in someone's cap.
- Policies should be consistent with the objectives

and strategies outlined in the National Sustaining Wetlands Forum, April 1990.

- Policies must allow for economic diversification.
- There are too many committees, bureaus and departments with jurisdiction over wetlands.
- A primary objective should be to minimize the bureaucracy.
- Wetlands should be included as a directorship in Alberta Environment.
- Local governments must be a legitimate part of this policy.
- The government should listen to public comments on the wetland policy.
- Government departments should eliminate policies that cause wetland destruction.
- The cost for compensation and manpower to administer wetland legislation will be significant.
- Significant wetland losses will continue while legislation is being reviewed.

2) Any legislative change required to implement an approved wetland management policy should be determined.

Strong support for legislative change to implement an approved wetland policy was expressed. Many respondents emphasized the need to act on legislation.

- Once a good policy is developed it should be given legislative protection.
- Legislative changes should be made as soon as possible.
- A moratorium should be placed on all programs and projects involving wetlands at all levels of government until legislative changes occur.
- Legislative change should be determined by the Department of Environment and the general public.
- Clear guidelines, adequate budget and enforcement are required.
- An action plan is required to ensure legislative changes take place.
- Regulations should outline which wetlands may be altered and when.
- Legislation should be used to provide incentives for private protection of wetlands.
- Regulations should be used to implement a no-net-loss policy for wetlands.
- The Tax Act should be changed to end tax deductions for draining wetlands.
- The Canadian Wheat Board should change the acreage based quota system because it encourages farmers to drain.
- Legislation should be used to set up a wetland agency.
- Cohesive legislation should be drafted to protect and enhance wetlands.
- A Wetlands Conservation Act should be created.
- Alberta Environment should manage wetlands under its proposed Environmental Protection and Enhancement Act.
- Various departmental policies should be changed and appropriate legislative changes should follow.
- The public should be involved in any legislative change.
- Activities that result in increased erosion or siltation should be illegal under the Water Resources Act.
- The wetland policy should be reflected in the Water Resources Act.
- Legislation on economic incentives and disincentives should be changed to implement the policy.
- Legislative change requires direct cooperation from persons engaged in agriculture.
- Legislation should be enforced.
- Appropriate legislation should be developed and released at the same time as the final policy to ensure compliance.
- All legislation pertaining to water should be consolidated in one act.
- A board should assess legislative change to determine the benefits and weaknesses of the policy.
- We cannot allow ourselves to be subject to political whim.
- Wetlands should have distinct status under environmental assessment laws including the Natural Resources Conservation Board Act and the Environmental Protection and Enhancement Act.
- New legislation may be required to set aside funds for the acquisition of wetlands in settled areas.
- Agriculture, Transportation and Utilities, Forestry and Environment should not be allowed to degrade a meaningful wetlands policy.
- The word "will" should replace "should" in the strategy.
- The wetland policy must not be watered down for oil companies, pulp mills, farmers or friends of government.
- A good policy should not be bogged down because of bureaucratic policies and procedures.
- Alberta should honour its commitment to the

North American Waterfowl Management Plan and preparation of a conservation strategy by 1992.

- The goods and services tax should be replaced with a green stamp program to enhance and save our environment.
- Money from sale of fishing and hunting licences should only be used for programs that improve habitat.
- The provincial government should support local governments in their decisions.
- Environmental impact assessments should be conducted before any water management projects (i.e. drainage, irrigation, sewage lagoons, waste water disposal) are constructed.

General Comments and Ideas

A broad range of comments was received in this policy category. Many responses were supportive of the wetland policy and the opportunity for public review. Many people requested a stronger policy with increased emphasis on wetland protection and quick action. Several were skeptical of the government's intentions.

- A comprehensive policy for conservation and protection of wetlands is urgently needed.
- The policy statements are generally good. The government must act quickly.
- The draft wetland policy is excellent and timely.
- The balance between the environmental responsibility of landowners and public support of individual actions to maintain public benefits will be difficult.
- The statement of principle is too vague and lacks action statements.
- A central, focused policy is a good idea.
- Public review of the policy is necessary and appreciated.
- An effective policy which recognizes total societal values of wetlands is long overdue.
- The key is not in policy making rather public and government awareness.
- Operational definitions need to be clarified (e.g. benefits, non-permanent, slough and marshland).
- It is difficult to determine exactly what the policy is.
- If it is not broken don't try to fix it. Don't reinvent the wheel.
- The policy is a good start that needs more specifics.
- The government should start with things that are achievable.
- Protection and conservation of wetlands should be a priority for all levels of government.
- Wetlands should be considered before any type of development occurs.
- Provision for dealing with situations where wetlands conflict with specific projects should be developed.
- Municipalities should be involved in developing the policy.
- Direction for wetlands and drainage conflicts except for permanent wetlands.
- Wetlands should not be the first priority.
- We hope that the government is serious about saving wetlands and other habitat.
- It is commendable that the government recognizes the significance of wetlands and the importance of public support for a wetland policy.
- Statement of principle does not provide direction because all demands are treated as equal and no priorities are set.
- The policy is flawed because it assumes wetlands should be maintained only so long as they serve humanity.
- The policy isn't strong enough.
- The policy should emphasize wetland retention not agricultural interests.
- Future generations should have the wildlife and aesthetic benefits of wetlands.
- The primary benefits of wetland go to society while the costs are borne by individual landowners.
- Farmers should preserve some habitat at their own expense.
- The general public must be willing to pay for wetlands.
- The value of wetlands as waterfowl habitat should be recognized.
- The value of wetlands should be continually emphasized.
- The economical and water benefits of wetlands should be recognized.
- The value and benefits of wetlands to everyone are underestimated and should be recognized.
- Wetlands are of little value to fish production.
- A no-net-loss policy for wetlands within the same planning unit should be implemented.
- Remaining wetlands should be protected and degraded wetlands restored for native wildlife and maintenance of water tables.

- Conversion to forage or pasture crops and protection of wetlands around towns and cities are effective, inexpensive approaches to slowing wetland losses.
- An integrated approach to determining individual wetland values is best given the complexity of the subject.
- Immediate protection of wetlands is essential.
- Poor land management is reducing the snow pack and resulting runoff that supplies wetlands.
- The emphasis of the policy should be on protecting and restoring viable wetland ecosystems with constraints on other uses.
- As a farmer, I believe we must save all remaining wetlands.
- Wetlands should be preserved as a renewable resource for the future.
- Conservation policies should not be overrode every time a politically well-connected business interest waves the banner of economic development.
- Perhaps wetland preservation needs a focus species such as the leopard frog to catch public attention.
- A wetland policy must take the views of all Albertans (i.e. rural and urban) into consideration.
- Drainage should be immediately halted and wildlife should be a priority.
- A full range of representative and special wetlands should be protected as part of endangered spaces initiative.
- An ecosystems approach to wetland management is required.
- The rate of wetlands loss should be slowed, if not stopped.
- Wetlands must be protected by legislation.
- Major wetlands over 5 acres in size in southern Alberta should be saved.
- Landowners should be educated and encouraged to see wetlands as more than problems.
- Wetlands should be allowed to run a natural course of aging (i.e. succession).
- Consumptive exploitation of wetlands should not occur.
- Wetlands are so valuable that we don't want to loose any more.
- Drainage is viewed by several departments as motherhood and it is difficult to stop a project.
- Conservation should be strengthened in the policy.
- Government control should be used as little as possible. The government should function as a regulatory body and financial source.
- A wetland inventory should include an evaluation system.
- A wetland classification scheme should indicate importance for conservation and permitted activities.
- Wetlands offer many benefits that are being lost.
- The policy should set conservation and education as the main goals of wetland management.
- Most wetlands should be conserved in a natural state. There should be very little development or management.
- Wetlands should be managed for biological diversity.
- The peat resource value identified in the policy is not sustainable. The policy should recognize the ecological and natural heritage values of wetlands.
- The extreme diversity of wetlands will make it difficult to apply proposed action plans.
- Wetlands are still not generally understood by legislators or the public.
- The public should be educated on the need and urgency of protecting wetlands.
- Balanced education about wetlands should be provided to school children.
- Legislators need to know the positive political payoff for sensible wetland management, education and legislation.
- Public pressure and financial incentives are required to overcome the greed and economic necessity that cause farmers to drain.
- Drainage should not occur without first completing environmental impact studies.
- Wetlands are a part of the environment and should therefore come before man.
- A process to deal with drainage is required until new policy and legislation are in place and functioning.
- Several drainage projects southwest of Barrhead did more harm than good.
- Education and enforcement should ensure unlicensed drainage does not continue
- If drainage of nonpermanent wetlands is allowed, then farmers should be encouraged to consolidate them into permanent wetlands.
- A moratorium on further wetland drainage should be placed in areas where they are already greatly diminished.
- Any incentives or subsidies to drain wetlands should be eliminated.
- Some wetlands should be developed as public parkland.
- The contribution of irrigation to wetland creation should be recognized.

- Wetlands should be protected from all-terrain vehicles and fenced to keep cattle out.
- Wetland restoration and soil conservation are first steps toward dealing with climate warming.
- Industry and agriculture must not be allowed to expand any further onto land containing valuable wetlands.
- Every landowner should reserve a minimum of 5 percent of each quarter for wetlands and wildlife. This would require fewer incentives if legislated.
- Clear guidelines for wetland management would benefit counties.
- The North American Waterfowl Management Plan is one of the best wetland protection programs.
- The concept of sustainable development should be referenced in the policy.
- Any projects in the province that affect wetlands should be required to undergo an environmental impact assessment.
- The government should do something about industry and feedlots along streams.
- Wetland management in other jurisdictions should be evaluated (e.g. Lee County in Florida).
- All land uses including farming should get approval of land use authority.
- Existing surface rights are weighed too heavily toward individual rather than common good.
- Land use activities should be limited to those with net benefits.
- Wetland management which maintains the status quo is not acceptable. Management should be aimed at recouping lost resources.
- All land use boils down to dollars and cents in the final analysis.
- More field and resource management action is required.
- Statement about benefits and values in the policy are unqualified and unquantified. People want facts, not statements passed off as facts.
- Government must stop doing everything to everyone. Government act as a catalyst not dictator. Private interests can often work quicker and cheaper but must be empowered.
- A better system to protect wetland ecosystems is required.
- The policy should contain more "wills" rather than "mays".
- Alberta Environment should licence wetland projects and Fish and Wildlife Division should help fund. No other departments need to be involved.
- An independent body is much more flexible, economic and timely.
- Drainage policies should be administered by Alberta Agriculture.
- There are too many departments with wetland management responsibilities. Wetlands should be solely under Alberta Environment's jurisdiction.
- Forestry, Lands and Wildlife should be put under Environment and reorganized. Existing personnel should be replaced.
- The role of local governments, regional planning commissions, educational institutions, interested organizations, community groups and private landowners in wetland management should be defined.
- An environmental ombudsman should oversee coordination of program development and delivery.
- The policy should deal with the unsettled area of the province (i.e. the Green Area)
- The scope of the policy is appropriate and public and private lands are well addressed.
- Tree farmers should be allowed to use herbicides and controlled burns.
- The true cost of subsidies must be determined.
- Financial incentives should be provided to landowners to preserve wetlands and upland cover.
- The criteria for Canadian Wheat Board quotas should be changed.
- Farmers that lose crops to wetlands should receive reimbursement (e.g. tax benefit).
- Alberta Agriculture should consider U.S. swampbuster type provisions (i.e. withhold subsidies from landowners who drain wetlands).
- All disincentives to wetland protection should be removed.
- Setting aside 10 percent of each quarter as wetlands or trees would be the easiest way to ensure farmer cooperation.
- Filling a wetland to obtain right of way is no longer a viable option. Environmental and ecological concerns must have priority (e.g. Wagner Bog, Lily Lake, North Cooking Lake).
- Strong wetland legislation is absolutely essential.
- Provincial and municipal road construction should not damage important wetlands.
- Consolidation of nonpermanent wetlands into permanent wetland should be encouraged for drainage projects.
- Municipalities should be involved in decision making on wetlands in settled areas.
- Water management funds should be spent more equitably across the province. More projects and less enforcement in the north.
- Public input should include all Albertans not

just directly affected individuals.

- Congratulations on this public participation program.
- Allowing normal citizens to formally give their views and opinions has been positive.
- Public hearings should be required for wetland projects on public lands or supported by public funding.
- We hope this is not a cruel joke on those of us who took the time and effort to comment on wetlands.
- Wetland areas that are presently or potentially significant for tourism should be protected.
- Crown ownership of permanent wetlands should be emphasized.
- A program to preserve wetlands on public land is required.
- Conservation and wildlife must be integrated into water management policies. Agriculture must also be integrated with wildlife.
- Ongoing research into ecology, chemistry and hydrology of wetlands should be fully supported.
- The role of the private landowner as steward of the land should be emphasized. Landholders should be accountable for how they manage their land.
- Consider banning all hunting in the settled area to improve landowner acceptance of wetland protection.
- Policies and administration of wetlands should be coordinated.
- All policies and legislation should be circulated throughout the province before implementation.
- Conflicting programs should be eliminated.
- Agricultural subsidies should depend on maintaining stubble until spring.
- All departments and levels of government need to work together.
- Cooperation and funding should be sought from U.S. agencies who benefit from wetlands.
- Less time should be spent on deciding who is to blame and more on coming up with solutions.
- The Migratory Bird Act should be used to protect wetlands.
- A Wetland Conservation Act similar to the Soil Conservation Act is needed in Alberta.
- Wetlands should be addressed by municipal planning and environmental assessment laws.
- Solid legislative backing is needed so government field people can implement the policy with a minimum of difficulty.
- A rewrite of specific acts is required to remove duplication and conflicts.
- Conservation of wetlands should be given legislative priority. All levels of government must adhere to the policy.
- The Sub-basin Water Management Planning pilot project could be used to implement the wetland policy.
- The wetland policy should be implemented.
- Implementation of the policy is required but will be difficult.
- Responsibility and resources to monitor implementation of the policy should be assigned.
- Wetland preservation should not be delayed because of government cutbacks.
- The cumulative effects of projects should be considered.

Specific Comments

Specific comments were provided on a wide range of topics including compensation, incentives, landowner rights, cooperation and coordination. Several responses asked for a stronger focus on wetland protection and questioned government sincerity regarding wetlands.

- The sincerity of federal and provincial Progressive Conservative governments on environmental issues is questionable (e.g. Oldman Dam, pulp mills, forest management agreements and native land claims).
- The policy needs to be more substantive and recognize constraints of on-going water management programs.
- Government will do what business dictates regardless of its own policies.
- Wetlands are precious and should be protected.
- Policy change should be rapid.
- Poor agricultural land should not be developed.
- The policy is too weak and vague.
- The policy tries to keep everyone happy which isn't always possible.
- Government actions are only posturing, while more marshes are drained because of inadequate policing and penalties. The government should really mean it or say otherwise.
- Wetlands should be protected for the future.
- There is too much emphasis on wetland management and not enough on protection.
- The policy should clearly address other kinds of wetlands in addition to slough/marshes.
- Indiscriminate elimination of our sloughs, shelterbelts and bush cover, particularly in south-central Alberta, should be stopped.

- The Alberta Water Resources Commission should be commended for this initiative.
- The government should not play with the public by asking for input if it already has an agenda that will do little to save wetlands.
- The government should be a seriously committed to this policy.
- The policy is generally acceptable but should be strengthened.
- This government cannot be trusted to protect any part of the environment let alone wetlands.
- The general statement should indicate no additional loss of wetlands.
- Wetland policies should be developed with environmental protection legislation to outlaw dumping of pollutants into wetlands.
- Better understanding of the value and management of wetlands is required.
- Wetlands that are not used for agriculture do provide multiple benefits.
- Wetlands are important in reducing impacts of droughts, recharging surface and ground water and providing a source of evaporation.
- Temporary shallow waterbodies are threatened and should be protected.
- Wetlands provide beauty and are an essential part of the well-being of the environment.
- Riparian areas, shorelines and uplands near wetlands have resources uses and users.
- The policy should strive for a balance between conservation and development.
- Wetland and riparian areas should be protected from urban and rural development and degradation.
- Proper management of wetlands is required.
- Time is of the essence when dealing with wetlands.
- A strict policy to protect and create wetlands is needed.
- Wetland policies should be consistent with conservation at all times.
- Land should be evaluated for use based on its true value.
- Wetlands that are created by beavers should be identified and researched.
- The policy should provide goals for wetland management that are useful for decision making.
- Livestock and forage use should be recognized as valid uses of wetlands.
- The policy should be regionally based. A province wide policy may be good for northern Alberta but may not be workable for southern Alberta.
- Regional and local differences should be recognized when policies are drafted.
- Politicians, bureaucrats, school teachers and university departments such as engineering and agriculture should be educated about ecology.
- The government should educate the public about wetland values, conservation and wildlife.
- The onus should be on drainage proponents to ensure wetland values are maintained on a regional basis.
- Disincentives (e.g. fines) are required to discourage drainage.
- The policy should make provisions for evaluating the need for drainage of permanent wetlands.
- The present policy of draining muskegs should be examined. They are valuable for water retention.
- As promoters and funders of drainage, the federal and provincial governments must show leadership in wetland protection.
- Wetlands should not be drained or converted into other uses.
- Direct and indirect government funding of wetland destruction should be eliminated.
- Compensation programs for wildlife damage are required to reduce land use conflicts and retain wetlands in prime agricultural areas.
- Existing compensation for wildlife damage is not enough to make retention worthwhile by farmer, especially for high value, irrigated crops.
- Public ownership and access to wetlands should be maintained where this can be done without threatening the local environment.
- Opportunities to create permanent and productive wetlands within irrigation districts should be recognized. Water licensing should acknowledge such projects in the allotment to each district.
- Reclamation of lost wetland areas should be considered.
- Removal of fertile sediments could deepen wetlands and provide fertilizer that could be sold commercially.
- All wetlands on private property should be restored to a natural state at the owners' expense. The government could supply trees and grass.
- More wetlands should be created especially in drier irrigated areas.
- Lead in shotgun shells should be replaced with steel shot.
- Better cost/benefit analysis is required; benefits are often exaggerated and costs underestimated.
- Wetlands are often a result of past glaciation and have a finite lifetime.
- Much wetland conservation will need to be

achieved voluntarily to reduce costs. The medium and long term benefits will far exceed the costs.

- An interdisciplinary approach to wetland management is needed.
- Key "unmanaged" wetlands should be identified and protected.
- Buffer zones should be maintained to allay landowner fears if wetlands are acquired by conservation organizations or the government.
- Development should be sustainable and environmentally sensitive.
- The general public should be educated about the value of wetlands and their role in the overall picture.
- Smaller watercourses should be included in wetland protection.
- Developments around wetlands should be planned on a watershed not site basis.
- An organization like the Environment Council of Alberta should prepare an annual report on the status of wetlands in Alberta.
- The Department of Forestry, Lands and Wildlife is like the fox watching the chickens.
- A wetland licensing body should be autonomous and free from political or departmental pressures.
- The Alberta Water Resources Commission should be represented on international laws or treaties such as the North American Waterfowl Management Plan, Migratory Birds Convention Act and International Endangered Species Act.
- Another expensive government department should not be created to do what mother nature has been doing for years.
- A body of government should be established to enforce this principle.
- The wetland policy should be extended to include unsettled regions of Alberta (i.e. Green Area).
- Mosquito control spraying is seriously disrupting wetland ecosystems near towns and cities and should be replaced with natural controls.
- Drainage of toxic chemicals into natural wetlands in agricultural areas should be addressed.
- Developments of recreational subdivisions on the shores of some large wetland areas should be addressed.
- Wetlands should be protected from chemical residues, destructive land uses, livestock and deposition of spoil dirt, garbage and concrete materials.
- Large scale payments to protect wetlands should be avoided. Removing incentives to drain is a better approach.
- Tax incentives are more appropriate than expensive grant programs. They apply to specific problems more directly and are less available for misdirection of funds. Wetlands would stay in private hands with incentives provided for more compatible agricultural practices.
- A tax should be collected to compensate landowners for crop damage and weeds.
- Financial compensation should be provided to farmers to implement their own wetland management plan. If the government tries to force a plan it will fail. Flexibility must be the rule.
- Public support is necessary and farmers must be compensated fairly in line with distribution of benefits.
- Incentives to property holders to destroy wetlands should be reduced or removed.
- Road construction, particularly by municipalities, should avoid wetlands.
- Strong enforcement of policy and regulations is needed.
- A certain amount of tree cover should be maintained on each quarter section.
- Logging should leave 10 acres on every quarter of land.
- Reclamation of bogs is very problematic and peat resources will not be sustained under increasing pressure. Peat industries should not have more priority than at present.
- Wetlands should not be drained for more farmland or grain quotas.
- Profitability of agriculture and forestry may be affected by wetland conservation.
- The effect of wetland protection on farm economics should be considered.
- Soil erosion is due to overuse, poor farming practices and dependency on chemicals.
- Wildlife habitat must be protected.
- Diversity in wetland wildlife populations should be maintained and maximized.
- All species of wildlife should be considered.
- The effect of habitat loss on some varieties of wildlife such as waterfowl should be recognized.
- Landowner opposition to conservation of wetlands should be addressed.
- Landowner acceptance and cooperation is required to conserve wetlands.
- Landowners should not be blamed for wetland loss or they will loose the incentive to protect wetlands.
- Public input must be seriously considered.
- Input that is contrary to the philosophy of this government should not be ignored.
- The public, including irrigation districts, should

be involved in development of legislation.

- Wetlands on Crown land should be protected.
- Environmental assessments should be completed on major drainage or flood control projects.
- Shoreline management should be integrated with water management to provide a balanced mix.
- People at the top of the watershed of major river systems should be responsible for maintaining sustained flows, adequate supply and clean, safe water for downstream users.
- Encroachment by landowners on adjacent Crown land along Kimiwan Lake should be addressed.
- Landowners must be allowed to redirect or locate water within their own property.
- Industrial and commercial water users should pay for the water they consume and for any pollution of the water they return.
- River pollution by domestic sewage and feedlots should be stopped.
- Namaka Lake should be further developed for wildlife populations and public education. Eagle and Stobart Lakes should also be included.
- Water management projects should not be piecemeal. Plans should be developed for a basin or watershed before individual projects are developed.
- Money should not be wasted duplicating research that has already been done by environmental groups and government departments. Research should not be used as a stalling tactic.
- The decision to drain or work through small nonpermanent wetlands should remain with the private landowner. A way to ensure that all landowners act responsibly must be found.
- The wetland policy must not infringe on property rights. Already the landowner often feels that he has little control over his own land.
- Government departments should cooperate and should be bound to comply with this policy.
- Present projects that affect wetlands should be put on hold until this legislation is passed. This includes roads and other government projects.
- Conflicting government programs must be eliminated.
- Federal policies should be changed or provincial policy will loose much of its effectiveness.
- Legislators are unable to understand and provide sufficient vision and direction to land use legislation generally, let alone wetlands.
- One piece of environmental legislation with a commitment to strong, enforceable action is preferable to future good intentions and cooperation.
- Trespass legislation should be revised and consolidated. Penalties should be increased and enforcement by all peace officers including fish and wildlife officers should be improved.
- Strict legislation is required to implement the policy.
- There is too much emphasis on legislative review. Enforcement of legislation should be monitored.
- The wetland policy should be implemented quickly and strongly. The environment must be the first concern.

Appendix 1

Organizations that provided written comments or were represented at the workshops.

Alberta Cattle Commission
Alberta Fish and Game Association
Alberta Irrigation Projects Association
Alberta Society of Professional Biologists
Alberta Trappers Association
Alberta Wilderness Association
Alberta Women's Institute
Alpine Club of Canada
Barrhead 4-H Club
Battleford Trail Surface Rights Association
Bonnyville Wetlands Society
Bow Waters Canoe Club
Calgary Regional Planning Commission
Camrose International Institute
Canadian Society of Environmental Biologists
Canadian Water Resources Association
City of Calgary
City of Edmonton
City of Grande Prairie
City of Lethbridge
City of Medicine Hat
City of St. Albert
Clifford E. Lee Sanctuary
Coal Association of Canada
Cooking Lake Moraine Landowners Association
County of Barrhead
County of Beaver
County of Camrose
County of Forty Mile
County of Grande Prairie
County of Lacombe
County of Leduc
County of Lethbridge
County of Minburn
County of Paintearth
County of Parkland
County of Ponoka
County of Smoky Lake
County of Strathcona
County of Two Hills
Defense Research Establishment Suffield
Dickson Fish and Game
Dryland Salinity Control Association
Ducks Unlimited Canada
Eastern Irrigation District
Edmonton Natural History Club
Edmonton Metropolitan Regional Planning Commission
Edmonton Bird Club
Environment Canada - Canadian Wildlife Service
Federation of Alberta Naturalists
Friends of Environmental Education Society of Alberta
Friends of Lily Lake
Improvement District No. 15
Improvement District No. 16
Improvement District No. 18
Improvement District No. 18(S)
Improvement District No. 21
Improvement District No. 22
Improvement District No. 23
Improvement Districts Association of Alberta
Irrigation Council
La Crete Flood Control Committee
Lakeland Forage Association
Lamont and District Environmental Trust Society
Lethbridge Naturalist Society
Lethbridge Northern Irrigation District
Mackenzie Regional Planning Commission
McLennan Tourism Action Committee
Ministik Lake Bird Sanctuary Society
Municipal District of Bonnyville
Municipal District of Clearwater
Municipal District of Fairview
Municipal District of Picture Butte
Municipal District of Provost
Municipal District of Smoky River
Municipal District of Spirit River
Municipality of Crowsnest Pass
Nature Conservancy of Canada
Northwest Peat Soils Association
Oldman River Regional Planning Commission
Palliser Regional Planning Commission
Peace Environmental Research Centre
Pembina Institute for Appropriate Development
Prairie Farm Rehabilitation Administration
Prairie Association for Water Management
Red Deer River Naturalists
Red Deer Regional Planning Commission
Red Deer Lake Community
Redcliff Angling Association
Saskatchewan Parks and Renewable Resources
Sherwood Park Fish and Game
Society of Grassland Naturalists
Soil Conservation Association of Neerlandia
South Peace Environmental Association
South Peace Regional Planning Commission
Southern Alberta Environment Group

Southern Alberta Water Management Committee
Special Areas Board
Stony Plain Fish and Game Association
Summer Village of Chestermere Lake
Taber Irrigation District
Tourism Industry Association of Alberta
Town of Bonnyville
Town of Castor
Town of Crossfield
Town of Grimshaw
Town of Lac La Biche
Town of McLennan
Town of Picture Butte
Town of Stony Plain
Town of Strathmore
Town of Taber
Trout Unlimited
Unifarm
University of Alberta Women's Club
University Women's Club of Calgary
Village of Botha
Village of Willingdon
Wagner Natural Area Society
Wainwright District Wildlife Conservation Society
West Central Forage Association
Westakiwin Fish and Game Club
Western Irrigation District
Wetlands Preservation Group - West Carleton
Wildlife Habitat Canada
Women of Unifarm
Yellowhead Regional Planning Commission